

## **WHITE PAPER:**

# **Legal Issues Related to Coalbed Methane Storage in Abandoned Coal Mines in Alabama**

**June 20, 1998**

## **ACKNOWLEDGMENTS**

This draft report was prepared under Work Assignment 3-1 of the U.S. Environmental Protection Agency Contract 68-W5-0018 by Raven Ridge Resources, Incorporated, and Penn, Stuart and Eskridge. Portions of the information regarding coalbed methane ownership cases and events through 1995 contained in this report are reprinted from Elizabeth A. McClanahan, Coalbed Methane: Myths, Facts and Legends of its History and the Legislative and Regulatory Climate into the 21<sup>st</sup> Century, 48 Okla. L. Rev. 471 (1995), and Elizabeth A. McClanahan and Sharon O. Flanery, Mineral Law Update Presented at the 15<sup>th</sup> EMLF Annual Institute in Lexington, Kentucky 1994. This report is a technical document meant to be used for information dissemination.

## **DISCLAIMER**

The views represented in this report do not necessarily reflect the views of the U.S. Environmental Protection Agency. The mention of trade names or commercial products does not constitute endorsement or recommendation for use.

## 1. History of Coalbed Methane Development

### Issues of Importance to Coalbed Methane Storage in Alabama

Coalbed methane, also known as coal seam gas, occluded natural gas, and gob gas, has historically been considered one of the greatest dangers to coal mining. Collected methane gas was intentionally vented to prevent accidental explosions or asphyxiation. Commercial extraction of coalbed methane was economically impractical.<sup>1</sup> Consequently, when deeds, contracts and statutes relating to coal and mining rights were drafted, the drafters rarely considered the question of coalbed methane ownership because it was considered valueless.<sup>2</sup>

Modern extraction methods have now made coalbed methane production practical. The analysis of coalbed methane ownership is thus complicated by the need to determine the intent of the parties at the time the contracts and/or deeds were drafted and executed. Courts are being called upon to determine the ownership of coalbed methane in situations where mining and mineral rights have been divorced from other incidents of ownership of the lands at issue. In its simplest form, the question is whether the entity which acquires the coal and/or gas rights, also acquires the coalbed methane rights.

The issue will also give rise to questions concerning the storage rights of coalbed methane. Can coalbed methane be stored in abandoned coal mines? If so, who owns the container space — the coal owner or the surface owner? These questions necessarily involve a complex interaction between traditional property and mineral rights laws.

In order to gain a perspective of coalbed methane development and the ensuing case decisions, it is essential to look at the beginning of coalbed methane development in the United States. The first serious research regarding coalbed methane production occurred in the 1970s when the U.S. Bureau of Mines and U.S. Steel developed a test project in the Black Warrior Basin in Alabama.<sup>3</sup> This program was expanded by the Bureau of Mines and the Department of Energy into a 23-well project. The project demonstrated that 73% of the "in-place" methane could be produced through vertical wells.<sup>4</sup> The Gas Research Institute (GRI) began its coalbed methane research in the 1980s. Its activities relating to coalbed methane have included estimating and evaluating the resource, cooperative well studies, reservoir engineering analysis, fracturing and completion work, operational improvements and recompletion of wells.<sup>5</sup>

The increased production of coalbed methane in the Appalachian, Black Warrior, San Juan, Piceance, Powder River and Greater Green River Basins indicates that coalbed methane has emerged as a valuable energy resource. In 1982, the national annual coalbed methane production was virtually zero.<sup>6</sup> By 1990, production nationwide had risen to 195 billion cubic feet (bcf), approximately 475 bcf was produced in 1992, and 1993 production reached 730 bcf.<sup>7</sup> Coalbed methane production increased to 858 bcf in 1994.<sup>8</sup> The number of coalbed methane wells in the nation had grown from a handful in 1982 to more than 6,600 in 1992.<sup>9</sup> By 1994, coalbed methane accounted for five percent (5%) of the nation's natural gas production.<sup>10</sup>

Nationwide coalbed methane production increased by fifty percent (50%) during the period between 1992 and 1994.<sup>11</sup> According to Richard A. Schraufnagel at GRI, coalbed methane production in 1995 reached 900+ bcf and 1996 coalbed methane production topped the 1,000 bcf mark.<sup>12</sup>

## **2. Summary of Coalbed Methane Development in Alabama**

As mentioned above, some of the earliest research into coalbed methane production occurred in Alabama. In 1978, the American Public Gas Association funded a three well research project in Pleasant Grove, Alabama. This was the first project focused on commercial recovery of the gas (as opposed to mine degasification) and the first time production from more than one coal seam within the same wellbore was attempted.<sup>13</sup> In that same year, Jim Walter Resources and Kaneb Energy, acting as a partnership, began research into coalbed methane production.<sup>14</sup> In 1981, both U.S. Steel and Jim Walter Resources began selling coalbed methane recovered in Pleasant Grove, Alabama.<sup>15</sup> In 1983, Alabama became the first state to implement rules specifically governing coalbed methane production.<sup>16</sup>

In 1980, eight coalbed methane well permits were issued in Alabama. Fifty-four permits were issued in 1985, 2,240 in 1990, and 203 in 1995.<sup>17</sup> By July of 1997, 109 permits had been issued. A total of 5,255 coalbed methane well permits were issued in Alabama between January of 1980 and July 22, 1997.<sup>18</sup> In 1982, annual coalbed methane production in Alabama totaled 1.6 bcf. Annual production exceeded 8.6 bcf in 1985, 23 bcf in 1989, 68 bcf in 1991, 105 bcf in 1993 and reached 112 bcf in 1995.<sup>19</sup>

There are currently twenty-one coalbed methane production fields in Alabama. Eighteen of these fields are located partially or entirely in Tuscaloosa County.<sup>20</sup> Two of the fields are located in the Cahaba Basin, and nineteen are in the Black Warrior Basin.<sup>21</sup> The most productive field has been the Brookwood Field, producing 155,444,464 mcf of gas between 1981 and 1996.<sup>22</sup>

## **3. Coalbed Methane Ownership Issues as Related to Coalbed Methane in Abandoned Mines**

In evaluating the use of abandoned coal mines for storage of coalbed methane, it is important to analyze the issues surrounding the ownership of the coalbed methane itself. An understanding of these ownership issues is necessary to recognize the potential ownership issues involving storage: (1) who has the power to grant storage rights?; (2) who owns the container space once the mineral it held is depleted?; (3) who determines when the mineral is actually depleted?; and (4) who owns the abandoned mine and shafts? These issues may give rise to the same interpretive issues raised by the parties engaged in coalbed methane ownership disputes.

Additional ownership issues relating to storage of coalbed methane in abandoned coal mines involves the use of cushion gas. In any storage facility, there must be a pocket or cushion of

gas in place in order to provide the pressure needed to operate the facility.<sup>23</sup> Cushion or base gas is the gas in the reservoir (abandoned mine) which is native to the reservoir and/or injected into the reservoir.<sup>24</sup> If the cushion gas is native coalbed methane, that is gas remaining in the mine, the importance of coalbed methane ownership issues is apparent. Who will be compensated for the coalbed methane remaining in the mine -- the coal owner, the gas owner, the surface owner? How does the fact that there is coalbed methane in the mine affect the ownership of the abandoned mine container space?<sup>25</sup> If no cushion gas exists or there is not enough cushion gas to maintain pressure in the abandoned mine, how will the injected gas affect the ownership issues? These issues will surely arise and will need to be answered in establishing an abandoned mine storage environment in Alabama.

Thus, it is imperative that we examine the issues of coalbed methane ownership. The question of the extent of mineral rights conveyed or reserved generally includes a consideration of the intent of the parties or drafters of the instruments (deeds and leases) or statutes which created the rights.<sup>26</sup> Therefore, courts are now being called upon to determine the intent of individuals who historically gave little, if any, consideration and likely never formed any intent as to the ownership of coalbed methane. In some instances, however, the courts must also decide whether the intent of the parties or legislators is or should be a factor in the coalbed methane ownership determinations.<sup>27</sup>

a. Coal Owner Argument

Many cases analyzing the coalbed methane ownership issue have included arguments regarding the definitions of "coal"<sup>28</sup> and "gas."<sup>29</sup> The location of the coalbed methane in the coal seam provides the coal owner with a substantial claim. The coal owner may claim that the coalbed methane is an inherent part of the coal and that ownership of the coal seam includes ownership of the "gas" contained within it.<sup>30</sup> The coal owner may further argue: (1) coalbed methane is adsorbed onto the coal; (2) the physical bond between the coal and the coalbed methane is so close that the two cannot be separated; and (3) the coal seam is the source of and the reservoir for the coalbed methane.<sup>31</sup>

b. Oil and Gas Owner Argument

The gas owner may argue that the chemical composition of coalbed methane is nearly identical to that of natural gas.<sup>32</sup> This fact provides the gas owner with a significant argument for ownership. Another theory the gas owner may espouse is that the right to produce coalbed methane from coal is no different than the right to remove natural gas from other subsurface formations (i.e. the sandstone formation, which may not belong to the gas estate owner).<sup>33</sup> The plain meaning of "gas" appears to definitively include coalbed methane. In contrast, "coal" commonly means a solid mineral, not a gas.<sup>34</sup> The oil and gas owner may also argue: (1) recovery methods parallel that of natural gas; (2) the migratory nature of coalbed methane is the same as that for natural gas; and (3) reversion of the container space to the gas owner once the coal is mined gives them a right to the gas (in cases where the gas owner is also the surface owner).

However, in analyzing the ownership issue, only a few courts have held that “gas” includes coalbed methane.

c. Surface Owner Argument

Finally, a surface owner may claim an interest in the coalbed methane, although this position is clearly the weakest. In many jurisdictions, ownership of the container space reverts to the surface owner once the coal is removed.<sup>35</sup> Therefore, a surface owner could claim that since he owns the container space where the coal was situated, he could also claim ownership of the coalbed methane within that space. This would not, however, be a substantial argument. The gas or coal owner could easily counter that as the “mineral” owner, it is entitled to ownership of the mineral within the container space. One fact situation that may afford an ownership claim by the surface owner is where the coal, oil and gas have been specifically severed. The surface owner could claim that since coalbed methane was not contemplated (but considered to be a hazard) at the time of the severance, ownership of the non-severed mineral, the coalbed methane, remains with the “surface” or “other mineral” owner.<sup>36</sup>

For example, assume that Landowner A owns the property in fee simple (no prior mineral severances). Landowner A sells the property to Landowner B reserving the coal. Landowner B subsequently sells the property to Landowner C reserving the oil and gas. Landowner A owns the coal and Landowner B owns the oil and gas. Thus, Landowner C, the “surface owner,” would apparently own the residual minerals. If the coal owner (Landowner A) and the oil and gas owner (Landowner B) do not own the coalbed methane, the “surface owner” (Landowner C) as the residual mineral owner could claim the coalbed methane ownership. The issue is further complicated by coal lessees, oil and gas lessees and mineral lessees.

#### 4. Coalbed Methane Case Decisions

There are nine (9) decided, one (1) pending and two (2) settled coalbed methane cases in the United States of major significance to coalbed methane ownership. Many of the opinions have arisen out of Alabama. In all of the cases, slightly different fact situations resulted in different holdings. The decided cases represent the landmark decisions and issues surrounding coalbed methane ownership. They are relevant to storage issues in Alabama because the theories and analyses of the various courts will provide insights into past and current views on coalbed methane ownership. The issues discussed in these cases may afford an opportunity for understanding the interpretive issues that may be faced by storage operators in Alabama

a. Decided Cases<sup>37</sup>

- i. *Ownership of and Right to Extract Coalbed Gas in Federal Coal Deposits*, (M-35935), 88 I.D. 538 (1981)

The Department of the Interior issued this 1981 opinion which concluded that coalbed methane gas was not reserved by the federal government when it reserved coal under the 1909 and 1910 Acts and that the federal government did reserve coalbed methane gas under the 1914 Act when the government reserved gas. The Solicitor's Opinion also concluded that federally owned coalbed gas should be exploited under oil and gas rather than coal legal authorities. These conclusions rested on six principles:

- (1) the 1909 and 1910 Acts and their legislative histories;
- (2) the 1914 Act and its legislative history;
- (3) the Mineral Leasing Act;
- (4) other federal legislation addressing the exploitation of associated minerals;
- (5) common law and scientific principles; and
- (6) coal and gas legal authorities in relation to exploration and production of coalbed gas.<sup>38</sup>

ii. *United States Steel Corp. v. Hoge*, 468 A.2d 1380 (Pa. 1983)

In *Hoge*, the Pennsylvania Supreme Court held that the gas which is present in the coal necessarily belongs to the coal owner. The court was asked to determine the ownership of coalbed methane, found in the "Pittsburgh" or "River" vein of coal owned by United States Steel Corporation (U.S. Steel), which underlaid certain tracts of land owned by Hoge, Cowan and Murdock (Hoge). U.S. Steel acquired ownership of the coal through a severance deed dated July 23, 1920.

The severance deed granted, in pertinent part, "all the rights and privileges necessary and useful in the mining and removing of said coal, including . . . the right of ventilation."<sup>39</sup> Hoge's predecessor in title reserved "the right to drill and operate through said coal for oil and gas without being held liable for any damages."<sup>40</sup>

In formulating its conclusion, the court considered the history of gas development; the general nature of coal ownership rights; and the language contained in the severance deed in question. The court held that, as a general rule, such gas as is present in coal must necessarily belong to the coal owner, so long as it remains within his property and subject to his exclusive dominion and control.

In examining the language in the severance deed, the court gave "effect to all its terms and provisions, and construe[d] the language in light of conditions existing at the time of its execution."<sup>41</sup> At the time of the severance deed, the court found that commercial exploitation of coalbed gas was very limited and sporadic. Thus, even though the unrestricted term "gas" was used in the reservation clause, the court did not believe the parties intended to reserve all types of gas.

The court found “implicit in the reservation of the right to drill through the severed coal seam for ‘oil and gas’ a recognition of the parties that the gas was that which was generally known to be commercially exploitable.”<sup>42</sup> The reservation was limited by the court to the right to drill through the coal seam to reach the oil and gas lying below the coal strata.

- iii. *Rights to Coalbed Methane Under an Oil & Gas Lease for Lands in the Jicarilla Apache Reservation*, No. M-36970, 98 I.D. 59 (1990)

The Department of the Interior rendered a decision addressing the question of whether coalbed gas was granted under oil and gas leases issued for Indian lands. The Department concluded that coalbed gas was granted under these leases. First, the Department determined that coalbed gas is “natural gas,” noting that this conclusion was not altered by the physical status of coalbed gas and recognizing that many types of gas take gaseous or liquid forms in reservoir rock.<sup>43</sup> Second, the Department concluded that the term “oil and gas deposit” as used in Indian leases includes coalbed gas.<sup>44</sup> Third, the Department concluded that coalbed gas was conveyed under Indian oil and gas leases irrespective of whether the parties had a specific intent to convey that resource.<sup>45</sup> Fourth, the Department reached these conclusions in reliance upon the 1981 Solicitor’s Opinion.<sup>46</sup>

- iv. *Carbon County v. Baird*, No. DV 90-120, 1992 WL 464786 (Mont. Dist. Ct. Dec. 14, 1992), *rev’d sub nom. Carbon County v. Union Reserve Coal Co.*, 898 P.2d 680 (Mont. 1995)

The lower court in *Carbon* held that the conveyance of “coal and coal rights with the right of ingress and egress to mine and remove the same”<sup>47</sup> included ownership of the coalbed methane gas contained in the coal as well as the exclusive right to develop such gas.

Union Reserve Coal Company was the successor in interest to a 1974 contract of sale that agreed to sell “all coal and coal rights with the right of ingress and egress to mine and remove the same.”<sup>48</sup> In 1991, Florentine Exploration and Production, Inc., obtained an oil and gas lease on the property in question. The lease granted Florentine “the exclusive right for the purpose of mining, exploring by geophysical or other methods, and operating for and producing therefrom oil and all gas, including coal seam methane of whatsoever nature or kind . . . .”<sup>49</sup> Florentine attempted to secure a protective coal seam methane gas lease from Union. Florentine, however, drilled a well before securing the protective lease and Union later rejected the offer. Carbon County initiated the suit and Florentine was allowed to intervene. Florentine sought to quiet title to the coal seam methane gas as conveyed to it pursuant to the aforementioned lease.

Coal seam methane was described by the court, in the findings of fact, as a product of the coalification process.<sup>50</sup> The court thus held that coal is both the



source of and the reservoir of the methane. The combination of methane gas and coal was noted by the court to be the cause of frequent and tragic explosions in coal mines.<sup>51</sup> In addition, the court noted that it was important for the coal mine operator to be able to mine the coal in the most economical and effective method.<sup>52</sup> Thus, it is necessary that the coal operator have control over the drilling of wells into the coal seam in order to minimize disruptions to the mining process caused by the drilling and completion of wells in the coalbed.<sup>53</sup>

The decision in the case turned on the interpretation of the language granting the “coal and coal rights.” The court relied upon the legal precedents rendered in *United States Steel Corp. v. Hoge*,<sup>54</sup> *Rayburn v. USX Corp.*,<sup>55</sup> and, *Pinnacle Petroleum Co. v. Jim Walter Resources, Inc.*<sup>56</sup> In each of these cases, the courts found in favor of the coal owner. The court noted that removal of methane gas is essential to the mining of coal. Before the coal can be safely mined, the coal operator must remove the methane.<sup>57</sup> These facts and legal principles, combined with the fact that coal is the source of and the reservoir of the coal seam methane gas, led the Montana court to hold that the conveyance of “coal and coal rights with the right of ingress and egress to mine and remove the same”<sup>58</sup> by Carbon County included “coal seam methane gas as a product of the coalification process, and included with it the ownership of the coal methane gas contained in the coal, as well as the exclusive right to develop or dispose of and [*sic*] coal seam methane.”<sup>59</sup> Accordingly, the court held that Florentine trespassed upon the coal. Thus, Florentine’s complaint requesting that the court declare it the owner of the coal seam methane gas and its counterclaim that it had acquired the right to produce the coal seam methane gas under the lease were dismissed.<sup>60</sup>

The district court decision was appealed to the Montana Supreme Court.<sup>61</sup> The main issue before the court was whether coal seam methane gas was a constituent part of the coal estate granted to Union.<sup>62</sup> The Montana Supreme Court closely examined the plain meanings of the terms “coal” and “gas” and concluded that coal and gas are mutually exclusive terms.<sup>63</sup> The court opined that “[s]ince coal seam methane gas is a fluid hydrocarbon and is produced at the wellhead, it falls within the statutory definition of gas and again it is distinguishable from coal, a solid hydrocarbon.”<sup>64</sup> It also noted that coal seam methane gas is potentially severable from the coal seam.<sup>65</sup>

The *Carbon County* Supreme Court reversed the district court and ruled that the district court had erred in awarding Union Reserve the right to produce the coalbed methane gas from the coalbeds.<sup>66</sup>

The court stated that “Union Reserve only acquired the coal and the incidental right to mine and remove the coal.”<sup>67</sup> It found that Florentine had been given the right to extract the coal seam methane gas, and that Union Reserve could extract and capture the gas only for purposes of safety incidental to its coal

mining operations.<sup>68</sup> Accordingly, it concluded that coalbed methane gas “is separate from coal and is not a constituent part of the coal estate.”<sup>69</sup>

v. *Southern Ute Indian Tribe v. Amoco Production Co.*, 874 F. Supp. 1142 (D. Colo. 1995) *rev’d* 119 F.3d 816 (10th Cir. 1997)

In 1991, the Southern Ute Indian Tribe (Tribe) sued Amoco Production Company,<sup>70</sup> other oil companies, individual oil and gas lessees and federal defendants in their capacities as trustees for the Tribe, claiming ownership of the coalbed methane underlying approximately 200,000 acres within the Southern Ute Indian Reservation in southwest Colorado. On September 13, 1994, the United States District Court of Colorado held that under the 1909 and 1910 Acts (the “Acts”), which were the source of title to the coal, the reservation of “coal” did not include coalbed methane. The Tribe appealed that decision.<sup>71</sup>

On July 16, 1997, the United States Court of Appeals for the Tenth Circuit reversed the lower court’s decision and held that the Tribe, as the successor in interest to the United States’ statutory reservation of coal, is the owner of the coalbed methane underlying the subject lands. In reaching its decision, the court analyzed the Acts that were the source of the Tribe’s interest. The Acts provided that patents issued for lands belonging to the United States “shall contain a reservation to the United States of all coal in said lands, and the right to prospect for, mine, and remove the same.”<sup>72</sup>

In analyzing the Acts, the Court of Appeals utilized various principles of statutory interpretation. It found that the legislative history of the Acts “suggested” that Congress intended to adopt “an interpretation of coal which encompassed both the present and future economic value of coal, including value that could only be realized through advances in technology such as those which drive the present day exploration for CBM.”<sup>73</sup> The Court was persuaded by the historical context and legislative history of the Acts that the coalbed methane was reserved to the United States. The Court noted that its decision was also supported by previous interpretations of analogous statutory mineral reservations.

Finally, the Court considered the 1981 Solicitor of the Department of the Interior opinion, *Ownership of and Right to Extract Coalbed Gas in Federal Coal Deposits*.<sup>74</sup> The Court found that the Solicitor’s opinion was not binding policy because it was not promulgated through the rule-making process nor adjudicated. It was only a “public pronouncement that Interior will not assert the federal government’s right to CBM under its reservation of coal” but rather under its oil and gas reservations.<sup>75</sup> The Court also stated that the case on which the Solicitor relied in support of his conclusion was overruled on appeal and that the opinion was inconsistent with Interior statements made contemporaneously with the Acts. The Court was convinced that the Solicitor’s interpretation of the Acts was arbitrary because he did not explain how “Congress could have intended to convey a substance neither known to be valuable nor severable at the time of

the enactments,” and so omitted potentially determinative factors from his analysis.<sup>76</sup> The *Southern Ute* case was remanded to the trial court to address various issues raised by the defendants.<sup>77</sup>

Subsequently, the Tenth Circuit Court of Appeals granted a rehearing en banc (before the full Court). A hearing was held on March 17, 1998, but no decision has been rendered to date.

- vi. *Rayburn v. USX Corp.*, No. 85-G-2661-W, 1987 U.S. Dist. LEXIS 6920 (N.D. Ala. 1987), *aff'd without opinion*, 844 F.2d 796 (11th Cir. 1988)

In *Rayburn*, the United States District Court for the Northern District of Alabama held that title to the coalbed methane was vested in the coal owner. The court's holding in *Rayburn* was “based on the language of the deed in question and is not a declaration that in all instruments the interpretation will be the same.”<sup>78</sup> The pertinent language in the 1960 severance deed on which the court based its decision is as follows:

Grantors herein covenant and agree that any right to explore for or produce oil and gas, or to drill wells for the exploration for or production of oil and gas in the above-described lands *shall be subject to the requirement that all coal seams located in said lands penetrated in such exploration or drilling operations shall be encased or grouted off* . . . .<sup>79</sup>

The court found this language to be clear and unambiguous. The clearly expressed intent of the parties was that the methane in the coalbed not be available to any well drilled by oil and gas lessees or assigns.<sup>80</sup>

- vii. *Vines v. McKenzie Methane Corp.*, 619 So. 2d 1305 (Ala. 1993)

In *Vines*, the Supreme Court of Alabama held that the ownership of methane gas, with the accompanying rights to develop and produce it, was included in the coal and mineral conveyances. The conveyancing language contained in two (2) pre-1910 mineral deeds (Deeds) was at issue. The deeds conveyed the following estates: (1) “all of the coal, iron ore, and other minerals”;<sup>81</sup> and (2) “all the coal and other minerals.”<sup>82</sup> McKenzie Methane Corporation (McKenzie) obtained coalbed methane leases (Leases) from the successors in interest to the grantees in the Deeds. McKenzie planned to drill coalbed methane wells independent of mining operation. The Grantors sought to prevent drilling operations on the property arguing that coalbed methane was not considered valuable at the time of the Deeds. Thus, coalbed methane was not conveyed by the Deeds and the Leases were, therefore, ineffective. At the trial court level, summary judgment was granted in favor of McKenzie.

The Alabama Supreme Court noted that coalbed methane is produced from coal seams and is formed during and as a by-product of the coalification process. It further noted that although some of the methane migrates out of the coal, a large amount remains behind and is physically bound to the coal. Because coalbed methane is liberated during mining and poses a significant hazard to the miners, it must be removed. The court found that the existence of coalbed methane in commercial quantities was recognized in Alabama as early as the 1920's. It was not, however, a significant industry until the 1980's.<sup>83</sup>

The court relied upon the legal precedents rendered in *United States Steel Corp. v. Hoge*,<sup>84</sup> *Rayburn v. USX Corp.*,<sup>85</sup> and *Carbon County v. Baird*.<sup>86</sup> In each of these cases, the courts held that the coal estate owner was also the owner of the coalbed methane gas.

The Alabama Supreme Court held that the evidence in the case at bar confirmed that the processes for coalbed methane gas drilling and coal mining are inextricably entwined.<sup>87</sup> The drilling process was noted by the court as an intrusion upon coal mining. The court, in keeping with earlier Alabama law construing mineral leases, held that "an express grant of 'all coal' necessarily implies the grant of coalbed methane gas, unless the language of the grant itself prevents this construction."<sup>88</sup> The court found that neither of the Deeds in question contained any limiting language, and in fact, clearly reserved only the surface rights. Accordingly, the court held that the ownership of methane gas, with the accompanying rights to drill for it, was necessarily included in the mineral estates granted in the Deeds and affirmed the summary judgments for McKenzie.<sup>89</sup>

viii. *Cantley v. Hubbard*, 623 So. 2d 1079 (Ala. 1993)

The Alabama Supreme Court in *Cantley* interpreted a 1929 warranty deed in an action involving conflicting claims to production royalties from three methane gas wells in a coal degasification field. In a 1924 patent, the United States reserved all the coal underlying the land in question. In a 1929 warranty deed, the grantor (a successor in interest to the United States) reserved "[a]ll mineral reserved to the United States."<sup>90</sup> On a motion for summary judgment, the court held that this language reserved all the minerals that were owned by the grantor at that time, i.e., all the minerals less the coal that had been reserved by the United States. The portion of the reservation "to the United States" was interpreted by the court as "merely an erroneous recitation of the prior reservation."<sup>91</sup> The court held that all mineral rights, other than coal, were clearly reserved by the grantor of the 1929 warranty deed. Thus, by implication, the coalbed methane was reserved by the 1929 warranty deed's grantor.

The *Cantley* court referred to *Vines v. McKenzie Methane Corp.*,<sup>92</sup> in a footnote and stated that it made no judgment as to the possible interests held by other

parties because the question of whether a lease of coal rights included the right to explore for and produce coalbed methane was not raised.<sup>93</sup>

ix. *NCNB Texas Nat'l Bank v. West*, 631 So. 2d 212 (Ala. 1993)

In *West*,<sup>94</sup> the appeal arose from a Mobile County Circuit Court decision in which the trial court held that the language granting the coal contained in the chain of title deeds (Deeds) vested ownership of the coalbed methane in the coal owners/lessees (Jim Walters Parties) and not in the gas owners (Trustee Bank). The Alabama Supreme Court affirmed in part, reversed in part and remanded the case for further proceedings.

The Alabama Supreme Court's decision in these cases, as in the lower court, hinged on the interpretation of the reservations and the conveyancing language contained in the Deeds. The Deeds granted the following estate: "all the coal, and mining rights . . .";<sup>95</sup> and reserved the following estate: "all interest . . . other than the above-described interests in coal and mining rights . . . . Grantor specifically reserves all of the oil, gas, petroleum and sulphur . . . ."<sup>96</sup> The Jim Walter Parties maintained that the coalbed gas was granted to them by virtue of the Deeds. Conversely, the Trustee Bank argued that the Deeds reserved the coalbed gas.

The trial court relied heavily upon the legal precedent rendered in *Hoge* and held that the coalbed gas belongs to the coal owner. However, the Alabama Supreme Court reached a different conclusion in part. In determining the intent of the parties to the Deeds, the Supreme Court relied upon general deed construction cases. The Supreme Court agreed with the trial court's analysis that the Deeds were not ambiguous. However, the Supreme Court did not agree that, as a matter of law, a reservation of "all gas" did not include coalbed methane. The court, focusing on the "plain meaning" of the words used in the Deeds and basic principles of property law, held:

the fact that the coalbed methane gas is produced by, and stored within, coal seams does not require the conclusion that a grant of 'all coal' includes coalbed methane gas, nor does it require the conclusion that a reservation of 'all gas' does not include coalbed methane gas . . . . However, careful analysis of the law of real property indicates that the ownership of coalbed gas depends upon its location at the time the gas is recovered or 'captured,' at which time it is reduced to possession.<sup>97</sup>

The court reasoned that under the rule of capture, gas that migrates from one property to another is subject to recovery and possession by the holder of the gas estate on the property to which the gas migrates.<sup>98</sup> The Supreme Court evaluated the conveyance of coal "as a distinct property [which] also includes that bundle of property rights included within the coal, such as the rights incident

and necessary to the recovery of the coal.”<sup>99</sup> Thus, the Supreme Court held that the rule evolved to settle disputes between oil and gas owners on separate tracts of land. The court held that this rule was also applicable to coalbed methane gas, a migratory mineral resource.

Thus, so long as the coalbed gas is bound within the coal seam in which it originated, the holder of the coal estate has the right to extract the gas and reduce it to possession. However, once the coalbed gas migrates out of the stratum in which it originated, the right to recover the gas belongs to the holder of the gas estate (footnote omitted).<sup>100</sup>

As to the venting of coalbed gas for mining purposes, the Supreme Court held, and the Trustee Bank agreed, that “[t]o the extent that ventilation is required by law, the coal owner will not be liable to the owner of the gas rights for any waste of methane gas that occurs during ventilation.”<sup>101</sup> The court held that the Trustee Bank had no interest in coalbed gas recovered from horizontal or vertical wells drilled directly into coalbeds before the coal is mined. The Trustee Bank does, however, have an interest in coalbed methane gas that migrates out of the coal seams, such as gas collected within the gob zone.

Thus, the court held that:

absent a clear showing to the contrary, the reservation of all gas includes the right to coalbed methane gas that migrates into other strata from out of the source coal beds where it formed. . . . based on the facts and circumstances of each case, and absent a clear showing . . . to the contrary, the reservation of coalbed methane gas does not include coalbed gas contained within its source coal seam, and that the holder of the coal estate has the right to recover *in situ* such gas as may be found within the coal seam. However, once that gas escapes unrecovered from the coal and migrates into other strata, then the holder of the gas estate has the right to reduce to possession the coalbed methane gas from the other strata. If the coal owner captures and sells gob gasses that have migrated into other strata, the gas owners are entitled to share in any profits on such sales, after taking into account the cost borne by the coal owner in capturing and marketing the gas.<sup>102</sup>

The Alabama Supreme Court affirmed the portion of the trial court’s holding that the Jim Walter Parties “have the exclusive right to produce and own coalbed methane gas from horizontal boreholes and vertical degasification wells drilled directly into the source coal seam.”<sup>103</sup> The Supreme Court, however, reversed the trial court’s holding regarding the right to recover coalbed methane from the gob area above the source coalbed and, instead, held that the Trustee Bank “has the exclusive right to produce and own all the coalbed methane gas that

has been, or that will be, produced from gob wells . . . .”<sup>104</sup> The case was remanded to the trial court for further proceedings regarding the determination of factual and legal issues.

x. *In re: Hillsborough Holdings Corp.*, 207 B.R. 299 (Bankr. M.D.Fla. 1997)

In *Hillsborough*, the Chapter 11 Bankruptcy claims involved issues regarding the alleged conversion of coalbed methane gas and damages for the same. The debtors, Jim Walter Resources, Inc. (Resources) and United Land Corporation (United), objected to proofs of claim filed by CTC Minerals, Inc. (CTC). CTC contended that it held a 22 ½ percent ownership interest in the oil and gas extracted from a 3,800-acre tract of land (Property), and that Resources and United converted coalbed methane gas from the Property, which was part of a coal mining and coal degasification field.

Although the court dismissed the claims against United for lack of evidence, the court considered whether Resources converted coalbed methane that was owned by CTC. Resources was the lessee under a coal mining lease and an oil and gas lease from Center Coal Company (Center Coal), the party who owned 100 percent of the coal and 55 percent of the oil and gas. Resources then entered into a joint venture to recover and market the coalbed methane gas. Resources made royalty payments to Center Coal pursuant to the oil and gas lease. However, Resources did not enter into a lease with CTC, which owned 22 ½ percent of the oil and gas.

Since the Property was located in Alabama, the court ruled that Alabama law created and defined CTC’s interest in the coalbed methane gas. The court then considered whether CTC (owner of 22 ½ percent of the gas) or Resources, as the coal lessee of Center Coal (owner of 100 percent of the coal and 55 percent of the gas), had ownership interests or the right to the specific methane gas extracted from the Property. Relying on the Alabama Supreme Court’s decision in *West*, the court noted that “[t]he ownership of coalbed gas depends upon its location at the time the gas is recovered or ‘captured,’ at which time it is reduced to possession [further citation omitted].”<sup>105</sup> Thus, the court held that the location at which Resources “captured” the coalbed methane gas determined the ownership issues.

Examining the sites of capture, the court held that based on the testimony of both parties’ witnesses and the exhibits placed into evidence “the methane gas extracted by Resources from horizontal wells and vertical wells was captured directly from the coal seams and, therefore, belonged to the coal owner and not CTC.”<sup>106</sup> Additionally, the court found that “the methane gas extracted by Resources via the horizontal borehole degasification method is captured directly from the coal seam and therefore belongs to the coal owner and not CTC.”<sup>107</sup> The court then examined the remaining issue - - the point of capture of gob well

gas. Since the evidence showed that the methane gas captured by the gob wells was not captured while still within the originating coal seam as required by *West*, the court held that: (1) Resources “lost any rights to gob well gas because the gas did not remain within the coal until the time of its capture”; and (2) “the coalbed gas migrated out of the stratum in which it originated and therefore, the right to recover the gas belonged to CTC as holder of the gas estate.”<sup>108</sup> The court found that there was no conversion because Resources had the right to extract gas to ventilate the coal mines. However, because CTC was a cotenant, CTC was entitled to share in any profits.<sup>109</sup>

b. Pending Case

*James C. Street v. OXY USA, Inc.*, Case No. 162-90 (Va. Cir. Ct., filed June 29, 1990)

The plaintiffs in *James C. Street v. OXY USA Inc.* filed a bill of complaint, in the Circuit Court of Buchanan County, Virginia, requesting a declaratory judgment to determine the rights of the parties to the natural gas and coalbed methane gas in a 458-acre tract. Street alleges that an 1887 deed, to OXY’s predecessors in title, did not convey the coalbed methane or the natural gas underlying the 458-acre tract. Thus, Street, as surface owner, contends that title to the natural gas and coalbed methane is vested in him. The coal lessee, Garden Creek Pocahontas Company (Garden Creek), and the coal sublessee, Island Creek Coal Company (Island Creek), were allowed to intervene in the case. Garden Creek alleged that as coal lessee it had the right to: (1) release coalbed methane into the atmosphere as a safety measure in its mining operation; and (2) capture the coalbed methane by virtue of its coal lease on the property.

Subsequently, Garden Creek and Island Creek filed a motion for summary judgment. They have argued that the 1887 deed which conveyed “all the coal and mineral in, upon, and underlying” the 458-acre tract did in fact convey the natural gas to OXY’s predecessors in title. In support of their argument, Garden Creek and Island Creek cited the decision in *Warren v. Clinchfield Coal Corp.*<sup>110</sup> The court in *Warren* held that the generic term “minerals,” unless otherwise qualified, embraced not only solid minerals but oil and gas as well.<sup>111</sup> As of the time of this document was completed, no decision had been reached on the intervenors’ motion for summary judgment.

c. Settled Cases

i. *Finite Resources, Ltd. v. Western Fuels-Illinois, Inc.*, No. 93-L-47 (Ill. Cir. Ct., filed July 20, 1993)

In *Finite*, Finite Resources, Ltd. (Finite), filed suit claiming that Brushy Creek Coal Company, Inc. (Brushy Creek), owed it royalties on the coalbed methane gas Brushy Creek was venting for its coal mine operation. Western Fuels-Illinois, Inc. (Western), the coal owner, leased its interest in coalbed methane to Finite. Thereafter, Brushy Creek and Western obtained a permit from the Illinois Department of Mines and Minerals, Division of Oil and Gas for the venting of



methane gas.<sup>112</sup> Finite claimed that Western and Brushy Creek were in violation of the coalbed methane gas lease terms and was claiming damages: (1) in excess of \$250,000 for Western's failure to plug the Henk No. 1 well; (2) in excess of \$250,000 for Western's alleged coalbed methane waste; and (3) in excess of \$250,000 for Brushy Creek's alleged coalbed methane gas waste.<sup>113</sup>

Brushy Creek and Western filed a countersuit claiming that Finite breached the development covenants of the coalbed methane lease and asked the court to declare the lease terminated.<sup>114</sup> Brushy Creek and Western sought damages in the amount of \$200,000.<sup>115</sup> Brushy Creek and Western claimed that since Finite did not develop the land as required in the coalbed methane lease, methane levels in the mine increased, and the mine was evacuated.<sup>116</sup> The damages include the claimed costs of drilling the methane ventilation well and loss of income from coal mining operations.<sup>117</sup> Other issues raised by Brushy Creek and Western involved Finite's royalty payments, rights to wells drilled prior to the lease and rental of these well sites.<sup>118</sup> This case was settled before trial. Therefore, the issues were never litigated and determined by the court.

- ii. *Pinnacle Petroleum Co. v. Jim Walter Resources, Inc.*, No. CV-87-3012 (Ala. Cir. Ct. July 28, 1989) (order partially granting defendant's motion for summary judgment)

In *Pinnacle*, Pinnacle Petroleum Company (Pinnacle) derived its interest in the oil and gas underlying the property in dispute through a printed form oil and gas lease dated August 31, 1978, from E.L. Hendrix and wife, to Alabama Basic Land Enterprises, Inc. Typewritten onto the first page of the Hendrix lease was the statement: "this lease does not include coal."<sup>119</sup>

Jim Walter Resources, Inc. (Jim Walter) derived its interest in the coal through a lease dated December 6, 1984, from The First National Bank of Tuscaloosa, Trustee, to the United States Pipe and Foundry Company. The coal lease referenced the Hendrix oil and gas lease and indicated that the coal lessee could remove and dispose of the coal seam gas subject to any right of the oil and gas lessee or its assignees.<sup>120</sup> The coal lease also made specific provisions for the removal of coal seam gas and royalty payments should the coal seam gas be sold.<sup>121</sup>

Pinnacle's arguments for partial summary judgment were (1) that its gas lease covered coalbed methane because methane is technically a "gas";<sup>122</sup> and (2) that after extraction of the coal is completed, the mined area reverts to the grantor.<sup>123</sup> Since a gob well produces methane only after mining occurs, this is a post mining method of extraction, and the methane should revert to the coal lessor.<sup>124</sup> Jim Walter relied primarily on the *Hoge* and *Rayburn* decisions in arguing that the coalbed methane was owned by the coal estate as a result of: (1) the characteristics of coalbed methane; (2) the history of coalbed methane

production; (3) the acknowledged right to remove the coal included the incidental right to remove the coalbed methane; and, (4) the conveyancing instruments revealed the intent of the parties as to the coalbed methane ownership and development.<sup>125</sup>

In its July 28, 1989 order, the court held that Jim Walter, as the coal lessee, had the exclusive right to produce coalbed gas from the property that was the subject of the lawsuit.<sup>126</sup> The action remained on the docket to settle factual disputes about whether any of the gas produced by Jim Walters was gas other than coalbed methane.<sup>127</sup> However, since that time, the case was dismissed with prejudice pursuant to a stipulation by the parties.

d. Analysis, Contrast, Comparison, and Resolution of the Important Alabama Decisions<sup>128</sup>

As evidenced by the previous coalbed methane case summaries, in the relatively sparse arena of coalbed methane ownership litigation, Alabama is the only state that has developed a comparative wealth of judicial opinions on the subject: *Rayburn v. USX Corp.*,<sup>129</sup> *Vines v. McKenzie Methane Corp.*,<sup>130</sup> *NCNB Texas Nat'l Bank v. West*,<sup>131</sup> and *Pinnacle Petroleum Co. v. Jim Walter Resources, Inc.*<sup>132</sup> Although Alabama state and federal courts have decided the coalbed methane ownership issue always looking at the “intent and/or production” theories as we have labeled them, the facts and complete analysis in each case are different. The trend of the Alabama cases has been to follow the landmark decision of *United States Steel Corp. v. Hoge*.<sup>133</sup> The Pennsylvania Supreme Court held that the owner of the coal estate has the exclusive right to coalbed methane possession. The trend was modified in *West* for reasons specifically related to Alabama law.

Typically, courts addressing the issue of coalbed methane ownership have explicitly based their decisions on the reservation language of the various deeds. Two elementary rules of construction have been employed: (1) where a deed is not ambiguous, the court is obligated to enforce the plain language of the reservation; and, (2) where ambiguities exist, the court may look to contemporary understanding on the date of execution of the deed to determine the intent of the parties. The Alabama cases purport to follow these rules of deed construction. The *West* decision, however, incorporates Alabama property law to reach a logical and consistent result. While none of the decisions are necessarily inconsistent, the *West* decision may prove to be the exception that overtakes the rule of prior precedents.

i. *Rayburn v. USX Corporation*<sup>134</sup>

*Rayburn* is possibly more interesting for its brief discussion of local petroleum exploration history than the ultimate resolution of the case. The trial court stated that the status of the oil and gas industry in 1960, the date of the deed reserving coal rights, was “pertinent to the question before the court.”<sup>135</sup> The court looked at local history, seeking evidence of serious consideration of coalbed methane

production. The court noted that as long ago as 1916 there was some indication that gas production from the Mary Lee Coal Seam was possible. However, this discussion was dicta and had no bearing on the resolution of the case. Given the holding, it is difficult to see why the court ventured into this line of reasoning and analysis.

The district judge concluded that the coal reservation was not ambiguous. By its plain language, the deed precluded anyone other than the owner of the coal estate from extracting coalbed methane. The deed required the grantor to include casing and grouting requirements in any subsequent grant of oil and gas rights. The requirement called for either casing or a cement plug to extend from fifty feet above any coal seam to fifty feet below the coal seam. The court concluded that such requirements were inconsistent with any intent to reserve coalbed methane rights in the grantor.

Therefore, the common understanding of commercial viability of coalbed methane extraction in 1960, or at any other time, was irrelevant to the holding. The case turned exclusively on the specific language of the conveyance of coal rights to USX Corporation. The same cannot be said for the second case, *Vines v. McKenzie Methane Corp.*<sup>136</sup>

ii. *Vines v. McKenzie Methane Corporation*<sup>137</sup>

In *Vines*, the Alabama Supreme Court adopted a position analogous to that of the Pennsylvania Supreme Court in *Hoge*.<sup>138</sup> The Alabama court held that common understanding at the time of the conveyances in question, a 1902 oil and gas lease, and an 1898 coal lease, conclusively vested rights to coalbed methane in the defendant coal owner.<sup>139</sup> The conveyancing language in *Vines* was not similar to the conveyancing language in *Rayburn*. The grant consisted of “all coal” and other minerals; no reservation of oil and gas was made. The court concluded that the *Hoge* analysis was correct, because coalbed methane historically was considered a nuisance, the grantor could not have intended to reserve rights in the gas. Because “all coal” was granted, the conveyance necessarily included coalbed methane.<sup>140</sup> The *Vines* court was careful to make the point, as was the *Hoge* court, that the holding did not preclude grantors from explicitly reserving rights in coalbed methane. The holding of *Vines* is that, absent specific language to the contrary, Alabama law does not recognize an implied reservation of rights in coalbed methane.

The *Vines* decision upheld summary judgment in favor of the coal owners. However, the dissent argued that the leases were ambiguous, leaving a question of material fact.<sup>141</sup> Summary judgment was improper where the intent of the parties was unclear. The author of the dissent in *Vines*, Justice Shores, authored the majority opinion in *West*. Justice Steagall, who joined the *Vines* dissent, concurred in the majority opinion in *West*. Given the modification of *Vines* in *West*, it is perhaps easiest to explain the later case as an attempt to

narrow the holding of *Vines*. The end result of *Vines* is that, absent deed language to the contrary, the coal owner is presumed to have the exclusive right to extract coalbed methane as long as it remains within the coal seam. The possessory rights issue with regard to the gob gas was not before the *Vines* court.

Possibly, the easiest attack on the *Vines* decision is that the court made no effort to look to substantive property law to resolve the dispute. The court instead purports to determine the intent of the parties at the time of the lease. The reality is that while the lessor almost certainly had no intention of retaining rights in the coalbed methane, the lessee would probably have gladly given them away. Neither party had any intention regarding the capture of coalbed methane. This is probably why Justice Shores' opinion in *West* garnered majority support: it resolved the issues based on Alabama property law. As such, the majority opinion in *West* is a more principled decision than the *Vines* decision, although it creates a two-tiered scheme of extractive rights and a royalty payment scheme that is not easily monitored on a practical level. It may be practically impossible, or at the very least, complex and expensive, to isolate the "gob gas"<sup>142</sup> derived from mined-out coal seams from the coalbed methane contained within an unmined coal seam or from the coalbed methane which has migrated from the coal seam into other formations, especially if these gasses are being produced from the same borehole. Although there are some experts who claim that such separation can be accomplished, it is not very practical in the "real-world scheme" of coalbed methane production.

Assuming that the gasses can be separated, how would the gasses be measured? How would initial drilling and frac development be encouraged when gob gas results in the biggest monetary gains? How would development costs be allocated among the coal, oil and gas owners? The coal owner receives the royalties from the coalbed methane contained within the unmined coal seams, while the gas owner is entitled to the coalbed methane that has migrated from the coal seams into other formations, including gob gas. If an operator cannot persuade the coal and oil and gas owners to agree to a production split, how can the gas owner be convinced to drill the well? Similarly, if the drilling and production is not conducted in conjunction with an active coal mine area, how can the coal owner be made to agree to the drilling of the well? Payment for only the royalties of coalbed methane contained within the coal seam may not balance against (or provide the incentive) for the coal owner to drill wells in, near, or through coal seams prior to mining. These issues were never litigated in *West* because, according to one of the party's attorneys, after the Alabama Supreme Court rendered its decision, the parties reached a settlement regarding outstanding issues. As a part of this settlement the gas owners leased their interest to the coal owners (the parties originally producing the coalbed methane). The royalty payments were structured in such a way as to avoid the necessity of determining the location from which any gas was produced.

iii. *NCNB Texas National Bank v. West*<sup>143</sup>

The *West* decision was the first to combine the elements of prior coalbed methane jurisprudence with the substantive law of real property. The deeds at issue in the case included a grant of “all the coal”<sup>144</sup> in the coal estate and reservation of “all the oil, gas, petroleum”<sup>145</sup> in the oil and gas estate. The court concluded that “all” means all; the term was not ambiguous.<sup>146</sup> Since the deeds were not ambiguous, the court applied a plain language interpretation.

Interpreting Alabama property law, the court determined that a two-tiered right of capture existed for the coalbed methane.<sup>147</sup> Alabama applies a nonownership theory of oil and gas rights.<sup>148</sup> Nonownership essentially means that ownership is not conclusive until the oil or gas has been reduced to possession. In other words, if gas migrates from land leased by gas lessee A to land leased by gas lessee B where it is captured, the gas conclusively belongs to B. In the context of the case, the court determined that since the gas lessee had rights to all gas, then gas that migrated from the coal estate to other strata could be extracted exclusively by the owner of the gas rights in that strata. All is all. Since gas was contained in a formation subject to the gas lessee’s interest, it was included within the grant of all gas. Thus, the oil and gas lessee, NCNB, was awarded rights in the gob gas.

The second tier of ownership derives from the right of the coal lessee to take whatever measures necessary to mine the coal. Since coal can only be mined safely and legally by removing coalbed methane, the coal owner necessarily has the right to remove and capture the coalbed methane within the coal seam.<sup>149</sup> Any other result would render the coal lessee incapable of mining.

The result of *West* leaves a few interesting questions unanswered:

The first has to do with the result in *Rayburn*. In that case, the deed reserving oil and gas ownership stated that casing must extend fifty feet above and fifty feet below the coal seam. In its holding, the court reasoned that the casing requirements indicated that the gas in the coal seam was not intended to be available to the grantors under the oil and gas reservation. The court held that the gas in the coal seam itself belongs to the grantees under the subject deed. However, the court never determined who has the right to the gas outside of the coal seam but within the cased area. Would gob gas within the 100-foot encased zone be available for extraction by the gas lessee? Would it be available to the coal lessee? Or would this gas be unavailable to either party under the combined effect of the lease and the holding in *West*? The result might be that since the lease required the 100-foot casing zone, the coal lessee obtained an interest in that strata sufficient to confer extractive rights. This conclusion is, however, pure speculation. The question is too esoteric to forecast a result under current Alabama case law.

A second question is how the logic of *West* might be applied in the majority of jurisdictions that apply an ownership in place theory of possession. The coal owner in these jurisdictions would presumably retain rights in the gob gas, but this would undermine the “all gas” foundation of the court’s opinion.

iv. *Pinnacle Petroleum Company v. Jim Walter Resources, Inc.*<sup>150</sup>

*Pinnacle* was decided by a trial court before the Alabama Supreme Court decided *West*. Therefore, the value of *Pinnacle* as precedent in Alabama is questionable. Pinnacle claimed to be the owner of rights to “all gas” within the lands described in the complaint. Pinnacle was the assignee of a 1978 lease of oil, gas and all other minerals except coal. Jim Walter was the lessee of all coal rights under a 1984 lease that expressly included the right to remove coalbed methane. Jim Walter was engaged in longwall mining of a gassy seam of coal and had undertaken a comprehensive program of degasification through vertical boreholes, horizontal in-mine boreholes and gob wells. In granting partial summary judgment to Jim Walter, the trial court relied on *Hoge* in holding that the coal owner’s rights extended to removal of gob gas.<sup>151</sup>

## 5. Ownership Claims to Storage Container Space

If the property that will be utilized for storage is a fee property (surface and no mineral severances -- all property rights are together in one bundle), there are no specific or problematic issues involved in acquiring storage rights.<sup>152</sup> However, complications may arise as the result of concurrent and future interests.<sup>153</sup> For example, the bundle of property rights may be separated into: (1) surface ownership; (2) coal ownership; (3) gas ownership; (4) oil ownership; and/or (5) residual mineral ownership (minerals other than coal, oil, and gas). Each of these ownership interests may have been leased to companies for development. The lessees of the mineral estates can then create additional burdens upon the leasehold -- overriding royalties, production payments, working interests, joint venture agreements, and farmouts, etc. Furthermore, the ownership interests themselves may be varied: (1) life estates; (2) remainders; (3) possibilities of reverter or reversion; etc.

Alabama’s Underground Gas Storage Act provides for the condemnation of “all surface and subsurface rights and interests necessary or useful for the purpose of operating [a gas] storage facility. . . .”<sup>154</sup> The right of eminent domain shall be without prejudice to the right of the owner of said land or of other rights and interests to drill or bore through the storage facility in such manner as shall comply with the orders, rules, and regulations of the Board issued for the protection of the storage facility, and shall be without prejudice to the rights of the owners of said lands or other rights or interests as to all other uses not acquired for the storage facility.<sup>155</sup>

Before the right of eminent domain may be exercised, a storage operator must obtain the approval of the State Oil and Gas Board of Alabama.<sup>156</sup> Procedures for obtaining such approval are discussed in Section VIII, *Jurisdictional Issues Regarding Storage in Alabama*. Once

approval is obtained, the condemnation of interests must follow the procedures set forth in the Alabama Eminent Domain Code.<sup>157</sup>

Pursuant to the Alabama Eminent Domain Code, before any condemnation action may be commenced, the condemnor must have the property appraised.<sup>158</sup> The property owner must be given the opportunity to accompany the appraiser during the property inspection.<sup>159</sup> The condemnor must, before commencing any action, make an offer, based on the appraisal, to purchase the property.<sup>160</sup> A condemnation action is commenced by the filing of a complaint for condemnation in the probate court of the county in which some part of the property lies.<sup>161</sup> The complaint must “[n]ame as defendants all persons who . . . are owners of or who have or claim any interest in the property sought to be taken; specify [sic] the nature of each defendant’s interest.”<sup>162</sup>

Although the Alabama Gas Storage Act and the Alabama Eminent Domain Code create a mechanism for a storage operator to acquire the interests necessary to establish a storage facility, they do not identify from whom the interests must be obtained. Therefore, even if the right of eminent domain is utilized to acquire the property, it is necessary to determine the ownership of the container space. It appears that the issue of depleted mineral space ownership has never been addressed in Alabama. It is unclear whether the mineral owner or the surface owner owns the space remaining after minerals are removed. Additionally, disputes could arise over the point at which a deposit is considered depleted. Therefore, any potential claimant of the property would be a necessary party to the eminent domain action.

a. Mineral Owner

A few jurisdictions have held that the mineral owner is the owner of the container space.<sup>163</sup> However, some jurisdictions have significantly limited the application of such a rule of law.<sup>164</sup> In one recent case, use of a mine as a storage container was contingent upon the fact that the minerals in the mine were not exhausted and the mine was not abandoned.<sup>165</sup>

b. Surface Owner

The majority of jurisdictions hold that the surface owner, not the mineral owner, owns the container space once the mineral occupying the space has been depleted and mining (or production) of the mineral is abandoned.<sup>166</sup> One justification for this approach is that rights to underground storage are in no way related to the use or enjoyment of the mineral interest.<sup>167</sup>

c. Ownership in Alabama

Because the issue of depleted mineral container space ownership has not been addressed in Alabama, an Alabama Court could adopt the majority position. Although it was not addressing the issue of storage space ownership, the Supreme Court of Alabama, in *Bagley v. Republic Iron & Steel Co.*, cited *Webber v. Vogel* for the proposition that “the right of transporting coal from adjoining lands through or over

leased lands exists . . . only so long as the coal conveyed is in good faith being mined. It would be a perversion of the intention of the parties to use such passageways merely and only for the purpose of reaching other coal . . . If such use were allowed, no owner of the surface land could tell when his estate would cease to be disturbed by workings underneath.”<sup>168</sup>

## 6. Coalbed Methane Regulatory Environment

Alabama has enacted statutory provisions and administrative rules and regulations governing oil and gas operations. In addition, Alabama has promulgated administrative rules and regulations that apply specifically to coalbed methane operations. These administrative rules and regulations apply to the permitting, drilling and production of coalbed methane gas.<sup>169</sup> The significant statutory and regulatory provisions applicable to coalbed methane operations are summarized below.

### a. Definitions

“Gas” is defined by the oil and gas statutory provisions (Act) to mean “[a]ll natural gas, including casinghead gas, and all other hydrocarbons not defined as oil.”<sup>170</sup> The administrative rules and regulations (Rules) further define “gas” to include “occluded natural gas found in coalbeds.”<sup>171</sup> A “gas well” is defined as a well “capable of producing gas from a gas pool or gas pools.”<sup>172</sup> In addition, the Rules define “coalbed methane gas” as “occluded natural gas found in coalbeds.”<sup>173</sup> “Coalbed methane gas well” means a “well capable of producing occluded natural gas from a coalbed or coalbeds.”<sup>174</sup>

### b. Public Policy and Implementation

The purpose of the Act is to prevent waste of oil and gas and to protect correlative rights.<sup>175</sup> The Act and the Rules are implemented and enforced by the Oil and Gas Board of Alabama (Board).<sup>176</sup> In addition, the state geologist shall be the state oil and gas supervisor (Supervisor), and is charged with enforcing the rules and regulations promulgated by the Board.<sup>177</sup>

### c. Permitting for Wells

Prior to drilling any oil or gas well, the oil or gas operator must file an application and fee with the Supervisor to obtain a well permit.<sup>178</sup> Drilling activities that require a permit specifically include: (1) drilling of any well in search of oil or gas; (2) drilling or converting any well for secondary recovery or disposal of salt water and other wastes; (3) drilling or converting any well for the development of reservoirs for storage of liquid or gaseous hydrocarbons; and (4) reentry of a plugged and/or abandoned well.<sup>179</sup>

All applications for a well permit must include the following: (1) a plat prepared by a licensed land surveyor or registered professional engineer showing the entire section



and surface and bottom-hole location of the proposed well<sup>180</sup>; (2) an affidavit of ownership or control whereby the applicant verifies that he owns or has control of one-hundred percent (100%) of the drilling rights; (3) a bond on a form designated by the Supervisor<sup>181</sup>; (4) an organization report on a form designated by the Supervisor showing the legal name of the operator, place of incorporation, name and post office address, business, and names of partners or owners in the case of partnership or sole proprietorship; and (5) illustrations or narrative material that may be necessary for the Supervisor to clearly understand the details of the operation.<sup>182</sup>

The Rules require that all wells be drilled with due diligence to maintain a reasonably vertical wellbore. However, upon application to drill a well that is to be intentionally deviated and directionally controlled, the Supervisor may issue a permit for a directionally controlled well.<sup>183</sup>

A permit shall expire six (6) months from the date of issuance of the same, if the permitted well has not been spudded.<sup>184</sup>

d. Spacing

The Rules require that a coalbed methane gas well be spaced on a unit based upon the maximum area which may be efficiently and economically drained by one well. The spacing shall be governed by special field rules for the particular field as determined by the Supervisor.<sup>185</sup> If there are no special field rules, then each well shall be drilled on a unit consisting of a governmental quarter-quarter section (approximately 40 acres), and located at least three hundred thirty (330) feet from every exterior boundary of the unit.<sup>186</sup> In addition, for a coalbed methane gas well completed in a pool for which special field rules have not been adopted, the Board shall determine the proper spacing for the production unit for said well.<sup>187</sup> Although the definition of "coalbed methane gas well" set forth above does not specifically include storage wells for coalbed methane, the permitting requirements for oil and gas wells in general apply to "drilling or converting any well for the development of reservoirs for storage of liquid or gaseous hydrocarbons."<sup>188</sup> Therefore, based on these definitions, the Rules applicable to coalbed methane wells would probably apply to coalbed methane storage wells.

e. Drilling

Every person drilling for oil or gas, or operating, owning or controlling or in possession of a well, drilled pursuant to the Rules, shall paint or stencil and post near the well the following information: (1) the name of the person drilling, operating, owning or controlling the well; (2) the name of the well; (3) the number of the well; (4) the permit number; (5) the name of county, section, township and range in which the well is located.<sup>189</sup>

The status of the well and operations performed on such wells shall be reported orally or in writing to the Board on the first working day of each week from the time the permit is approved or pits are constructed, until the well is plugged or abandoned. In addition, the Supervisor must be notified and approval obtained prior to certain operations.<sup>190</sup>

There are minimum requirements applicable to the setting and testing of casing, unless otherwise specified or approved by the Supervisor. These requirements include minimum amount of surface or first intermediate casing to be set below ground level, cement requirements, and test pressure requirements.<sup>191</sup> All producing coalbed methane gas wells shall be completed with a production string of casing that shall be properly cemented at a sufficient depth adequate to protect the methane bearing coalbeds in accordance with the requirements of the Supervisor.<sup>192</sup>

All wells must be plugged within thirty (30) days of completion unless provisions for future utility of the well have been approved by the Supervisor.<sup>193</sup> An operator may request that a well be classified as shut-in where the well is capable of producing oil and/or gas but must remain shut-in until connected to a gathering system, pipeline or cleansing facility.<sup>194</sup> Plugging a coalbed methane gas well shall include setting a cement plug across each productive interval or intervals. The cement plug shall extend at least twenty-five (25) feet above and below each interval.<sup>195</sup> Furthermore, a cement plug not less than one hundred (100) feet in length shall be placed immediately above the top of the uppermost completed coalbed.<sup>196</sup> The Rules also require that a cement plug of not less than one hundred (100) feet in length be placed fifty (50) feet above and below the base of the production casing and surface casing.<sup>197</sup> All coalbed methane wells must have a cement plug of at least twenty-five (25) feet in length placed near the surface of the ground in each hole plugged.<sup>198</sup>

Every well owner, operator, contractor, driller, or other responsible person is required to keep at the well a detailed and accurate record of the well accessible to the Board and its agents at all times. Furthermore, pertinent information from such records must be provided to the Board within thirty (30) days after completion.<sup>199</sup>

f. Records

All operators of oil and gas wells, plants, refineries, and transporters of oil or gas must make sworn reports of their operations on forms prescribed by the Board or the Supervisor, to be filed by the twenty-eighth (28th) day of the month subsequent to the period for which the report is made. Such reports include a producer's monthly report, transporter's and storer's monthly report, and a processor's report.<sup>200</sup>

g. Unit Operations

The Board may, upon its own motion, or the application of any interested person, hold a hearing to consider the need for the operation as a unit of an entire field or of any pool or pools for the production of oil or gas or both.<sup>201</sup> The Board shall issue an order requiring unit operation if it finds the following: (1) that unit operation is reasonably necessary to prevent waste, to increase the recovery of oil or gas and to protect the correlative rights of interested parties; and (2) that the estimated additional cost will not exceed the value of the estimated additional recovery.<sup>202</sup>

h. Forced Integration and Pooling

Where any mineral or other related interests deriving from two or more separately owned tracts are embraced within an established or proposed unit, or when there are separately owned interests in all or part of a unit, persons owning such interest may agree to integrate or pool such interests.<sup>203</sup> However, where the owners have not agreed to pooling, the Board shall require that such persons do so and develop their interests as a drilling or production unit.<sup>204</sup> All orders requiring integration and pooling shall be made after notice and hearing and shall be upon terms and conditions that are just and reasonable and which will afford to the person owning each such interest the opportunity to recover or receive his just and equitable share of the oil and gas in the pool without unnecessary expense.<sup>205</sup>

Where owners have not agreed to develop their lands and interests as a drilling unit, and it is proposed that the Board establish such unit, the Board has promulgated rules governing the pooled unit. The operator appointed by the Board to develop and operate the forced integrated or forced pooled unit shall bear the cost of development and operation of such unit. The operator may recover his costs out of production attributable to each non-consenting owner, except as otherwise provided by the Rules.<sup>206</sup> Upon receipt of a written request by the non-consenting owner, the operator designated by the Board shall submit a statement of costs to such non-consenting owner and also provide certain information regarding dates of significant events and production figures.<sup>207</sup> Upon a written request to do so, the designated operator must also advise each non-consenting owner as to whether or not royalty due by such non-consenting owner to his lessors will be paid by the operator.<sup>208</sup>

After the date upon which a non-consenting owner's pro rata share of the total costs have been recovered by the operator, the operator shall, upon request, furnish the non-consenting owner with copies of drilling reports, well logs, and such other information as is provided to consenting owners.<sup>209</sup>

i. Processing and Transportation

All production and processing facilities must be designed, installed, and maintained in a manner that provides for efficiency, safety of operation, and protection of the environment.<sup>210</sup> Furthermore, all such facilities must be approved by the Supervisor.<sup>211</sup>

A certificate of compliance and authorization to transport must be obtained from the Board for the transportation of oil, gas or condensate from any drilling or production unit. Furthermore, no pipeline shall be disconnected from any well without first securing permission to do so from the Supervisor.<sup>212</sup>

All intrastate gathering lines, located in a rural area, must be designed, installed,

constructed, and maintained in accordance with the Rules promulgated by the Board.<sup>213</sup> Prior to construction and operation of a gathering line, approval must be obtained from the Supervisor.<sup>214</sup> Certain information otherwise required to be submitted to the Supervisor is not required specifically for coalbed methane production operations.<sup>215</sup>

j. Notice and Objection

Before any rule, regulation, or order, including revocation, change, renewal or extension is made by the Board, a public hearing before the Board shall be held.<sup>216</sup> The Board, the Attorney General, an operator or producer, or any other interested party may institute proceedings for a hearing.<sup>217</sup>

k. Taxes

Alabama levies upon the producer of oil and natural gas a tax equal in amount to two percent of the gross value, at the point of production, of the crude petroleum oil or natural gas produced for sale, transport, storage, profit or for use from any well or wells in the State of Alabama.<sup>218</sup> Natural gas lawfully injected into oil or gas pools or reservoirs in the soil or beneath the soil or waters is exempt from this tax.<sup>219</sup> However, gas injected into underground storage facilities is not exempt from the tax.<sup>220</sup>

Every person producing or in charge of the production for sale, transport, or storage shall keep and preserve such records of the amount of all gas produced for sale, transport, storage, profit or for use as may be necessary to determine the amount of the tax. Such persons must also file returns with the Department of Revenue.<sup>221</sup>

## **7. Coalbed Methane Gas Well Plugging Fund**

The Coalbed Methane Gas Well Plugging Fund (the Fund) has been created to be held by the state treasurer and administered by the Supervisor.<sup>222</sup>

a. Public Policy

The legislature of the state of Alabama has found and declared that “the protection of Alabama’s environment is vital to the economy” of Alabama, and that “coalbed methane wells are an important source of natural gas for use in industry and by consumers thereof in Alabama.” The legislature has further found and declared that as coalbed methane wells “are becoming increasingly common in Alabama,” the promotion of public and private interests requires that “coalbed methane gas wells be properly plugged when abandoned” and that “delays therein may affect the environment or public health, safety and welfare.” Accordingly, the legislature has directed that adequate financial resources be available to provide for the expeditious plugging of such wells.<sup>223</sup>

b. Use of the Fund

The Board may use moneys in the Fund to provide for the proper plugging of a well when the following conditions are satisfied: (1) the failure of the operator of a coalbed methane gas well to plug such well may pose a threat to the environment or the public health, safety or welfare; (2) the operator of the well shall have failed or refused to plug the well within a period deemed reasonable by the Board; and (3) the bond filed by the operator is inadequate to provide for the payment of the costs of plugging the well.<sup>224</sup>

c. Liability of Owner and Operator

Where costs of plugging have been incurred by the Board, the operator of the well and all working interest owners shall be jointly and severally liable to the state for repayment of the amount of the moneys expended from the Fund.

## 8. Jurisdictional Issues Regarding Storage in Alabama

a. State Oil and Gas Board of Alabama

Alabama has enacted statutory provisions governing underground gas storage reservoirs. These provisions are also implemented and enforced by the State Oil and Gas Board.<sup>225</sup>

i. Definitions

"Underground storage" is defined as "[s]torage in an underground reservoir."<sup>226</sup>  
"Gas" is defined to specifically include "occluded natural gas found in coalbeds."<sup>227</sup>  
Furthermore, an "underground reservoir" means "[a]ny subsurface sand, stratum, formation, aquifer, or cavity, cavern or void (whether natural or artificially created), suitable for or capable of being made suitable for the injection and storage of gas therein and the withdrawal of gas therefrom."<sup>228</sup>

ii. Public Policy

The legislature has declared that the underground storage of gas promotes the conservation thereof, permits the accumulation of large quantities of gas, provides more uniform withdrawal from fields, and is in the "public interest and welfare of this state and is for a public purpose."<sup>229</sup>

The Board has jurisdiction over all persons and property necessary to administer and enforce the provisions concerning underground storage of gas.<sup>230</sup>

iii. Orders of Approval

Prior to use of an underground reservoir as a storage facility for gas, the Board

must enter an order, after notice and hearing, approving such proposed storage. The Board must also designate the horizontal and vertical boundaries of the storage facility, such boundaries to include any necessary and reasonable buffer zone to insure safe operation of the facility and to protect against pollution, invasion, and escape or migration of gas.<sup>231</sup>

The Board may enter an order of approval upon the following findings: (1) that the storage facility is suitable and feasible for the injection, storage and withdrawal of gas and has a greater value or utility for the storage of gas than for the production of any remaining volumes of presently commercially recoverable hydrocarbons; (2) that the underground reservoir does not contain proven commercially producible accumulations of oil or gas, or if it does, a majority in interest of all owners in the pool have consented to such use in writing; (3) that the use of the facility for underground storage of gas will not contaminate other formations containing fresh water or oil, gas or other mineral deposits; and (4) that the proposed storage will not unduly endanger lives or property.<sup>232</sup> Upon the issuance of an order of approval, the order must be filed for record in the probate court of the county or counties in which the storage facility is to be located.<sup>233</sup>

If an underground reservoir that contains commercially recoverable oil and/or gas has been approved, the Board shall, after notice and hearing, determine the amount of remaining commercially recoverable oil and/or gas in said reservoir. The Board shall also determine a period of time which encompasses the remaining natural production capability of the underground reservoir to produce the commercially recoverable gas and then determine an apportionment of the total volume of such gas withdrawn from the storage facility between (i) injected gas withdrawn from storage and (ii) production of said remaining commercially recoverable gas in said reservoir.<sup>234</sup>

#### iv. Title to Stored Hydrocarbons

The Alabama statutory provisions expressly state that all hydrocarbons within the storage facility on May 21, 1992, and at all times thereafter, and which have been acquired by the storage operator by condemnation or otherwise, including any and all gas injected into said facility by the storage operator "shall be deemed the property of the storage operator, his heirs, successors and assigns."<sup>235</sup> Furthermore, such hydrocarbons or injected gas shall not be subject to the right of the owner of the surface of the lands or of any mineral interest therein under which such storage facility shall lie or be adjacent to or of any person other than the storage operator.<sup>236</sup>

#### v. Tax Exemption

No storage operator is subject to tax on production, severance, extraction or withdrawal of gas that has been injected into a storage facility when such gas is extracted or withdrawn.<sup>237</sup>

vi. Applicability to Secondary or Tertiary Recovery

The provisions regarding underground storage are not applicable to the conduct of gas storage operations that are part of any secondary or tertiary recovery methods being utilized with respect to a unit pool, and the Board shall not allow the creation or operation of a storage facility where such recovery methods are being utilized.<sup>238</sup>

b. Alabama Public Service Commission

The Alabama Public Service Commission (PSC) is authorized to regulate gas pipelines and transportation.<sup>239</sup> "Transportation of gas" is defined as the "gathering, transmission, distribution and storage of natural gas and the transmission and distribution by pipeline of all kinds of gas other than natural gas."<sup>240</sup> "Gas" is defined as "[n]atural gas, flammable gas or gas which is toxic or corrosive."<sup>241</sup> These definitions distinguish between natural gas and other gas, but do not specify whether coalbed methane is considered natural gas. It does appear that if coalbed methane is not "natural gas" it falls into the "flammable gas" category. Therefore, any pipeline system within a storage facility appears to fall within the PSC's jurisdiction.

The PSC regulates gas pipelines that transport gas on an intrastate basis in situations where the gas has been cleaned and pressurized to the point that it is ready for sale.<sup>242</sup> All pipeline systems in Alabama must "be constructed, operated and maintained . . . to be in compliance with the defined federal minimum safety standards."<sup>243</sup>

The PSC has not enacted its own regulations relating to pipeline safety.<sup>244</sup> Instead, it enforces the federal Department of Transportation Office of Pipeline Safety's Pipeline Safety Regulations.<sup>245</sup> These regulations specify standards for pipe materials, pipe design, design of pipeline components (including design of compressor stations, and pressure control and relief measures), welding and joining, general construction, corrosion control, testing, operations and maintenance.<sup>246</sup> In addition, the regulations require the filing of annual reports, incident reports and reports on safety related conditions.<sup>247</sup> The regulations also require pipeline operators to implement employee drug and alcohol testing programs.<sup>248</sup> Any pipelines which transport gas on an interstate basis fall under the jurisdiction of the federal Department of Transportation, Office of Pipeline Safety.<sup>249</sup>

## 9. History of Gas Storage in Alabama

There is currently one underground natural gas storage facility operating in Alabama. Mobile Gas Services operates the Bay Gas Storage Facility in Washington County which stores gas in the McIntosh Salt Dome. The 16,800,000 cubic foot container was created by solution mining and can hold a total of 46 Bcf of gas with 2.6 Bcf of working gas. The facility can accommodate

33 MMcf of gas injected per day and supply 1 MMcf of gas per day (i.e. withdrawal volume). The container's maximum pressure, measured at the well base (4,012 feet), is 3,400 psig.<sup>250</sup>

## 10. Conclusion

This report did not attempt to undertake an in-depth analysis of all the issues related to coalbed gas storage in abandoned coal mines in Alabama.<sup>251</sup> Rather, it attempts to generally survey the state statutes, regulations, and cases related to coalbed methane ownership issues, container space ownership issues, and gas storage issues in Alabama.

In considering the prospect of coalbed methane storage in abandoned coal mines in Alabama, several major issues must be addressed. With regard to ownership of the storage space, these issues include: (1) who owns the abandoned mine and the container space that remains after the mineral has been depleted? and, (2) if ownership depends upon the mineral being depleted or no longer recoverable, when is the mineral actually no longer recoverable, and who makes this determination? As noted in Section V, *Ownership Claims to Storage Container Space*, Alabama has not addressed many questions which will impact ownership of the storage space, including: (1) when the mineral is no longer recoverable; and (2) what happens if the mine is abandoned and there is still recoverable coal, or if new techniques are discovered providing a means for recovering coal previously thought unrecoverable.

In addition to issues related to ownership of the storage space, an entity considering storage of coalbed methane in abandoned coal mines in Alabama must also address questions related to ownership of the coalbed methane already present in the mine that will be used as cushion gas and how the injection of gas into the mine will affect ownership of the coalbed methane already present. Although Alabama has addressed the issue of coalbed methane ownership more times than any other state, the Alabama cases probably would not resolve a dispute over ownership of gas present in an abandoned mine. It appears that, at least in a situation involving severance language similar to that in *West*,<sup>252</sup> the coal owner owns any gas captured from the source coal seam, while any gas that has migrated into other areas from the source seam belongs to the gas owner. However, even if the severance language in the instruments involving the storage property is similar to a decided case, other questions may arise. For example: should gas that is present in the empty space where the coal seam was located be considered as within the source seam? Any questions that might arise surrounding title to injected gas would likely be resolved by Ala. Code § 9-17-153(b), which states that all gas injected into a storage facility is the property of the storage operator.

Finally, a party considering the storage of coalbed methane in abandoned mines in Alabama will have to work with those state regulatory bodies which will have jurisdiction over the operations. The State Oil and Gas Board of Alabama will have the majority of regulatory control over a storage facility. The Public Utility Commission has jurisdiction over pipelines and related equipment within the storage field.



## ENDNOTES

- 
1. *Southern Ute Indian Tribe v. Amoco Prod. Co.*, 874 F. Supp. 1142 (D. Colo. 1995) rev'd 119 F.3d 816 (10th Cir. 1997); *see also* J. Thomas Lane, *Fire in the Hole to Longwall Shears: Old Law Applied to New Technology and Other Longwall Mining Issues*, 96 W. VA. L. REV. 577, 621 (1994).
  2. *See infra* notes 25-26 and accompanying text.
  3. Richard A. Schraufnagel et al., *Coalbed Methane Development Faces Technology Gaps*, OIL & GAS J., Feb. 5, 1990, at 48.
  4. *Id.*
  5. Matt Benson, *VOGA's Work Reaps Success Within Political Arena*, AM. OIL & GAS REP., Aug. 1994, at 127.
  6. Stephen D. Ban, GAS RESEARCH INST., EXECUTIVE RESEARCH LETTER (Feb. 1993).
  7. *Id.*; Benson, *supra* note 5.
  8. Scott H. Stevens, et al., *Technology Spurs Growth of U.S. Coalbed Methane*, OIL & GAS J. Jan. 1, 1996, at 57.
  9. 11 GAS RESEARCH INSTITUTE, QUARTERLY REVIEW OF METHANE FROM COAL SEAMS TECHNOLOGY No. 1 at 2 (David G. Hill ed., Aug. 1993) [hereinafter QUARTERLY REVIEW NO. 11]; *see also* Benson, *supra* note 5.
  10. Stevens, *supra* note 8 at 56.
  11. *Id.* at 57.
  12. Telephone interview with Richard A. Schraufnagel, Gas Research Institute (Sept., 1997).
  13. *History of Coalbed Methane in Alabama*, State Oil and Gas Board of Alabama <<http://coalbed.com/history.html>>.
  14. *Id.*
  15. *Id.*
  16. *Id.*
  17. *Id.* The total number of new coalbed methane well permits issued each year in Alabama is as follows: 8 permits in 1980; 60 permits in 1981; 29 permits in 1982; 57 permits in 1983; 100 permits in 1984; 54 permits in 1985; 73 permits in 1986; 129 permits in 1987; 479 permits in 1988;

- 
- 1,079 permits in 1989; 2,240 permits in 1990; 186 permits in 1991; 152 permits in 1992; 88 permits in 1993; 92 permits in 1994; 203 permits in 1995. *Id.* 117 new well permits were issued in 1996. *Permitting History of Coalbed Methane Wells In Alabama*, State Oil and Gas Board of Alabama, <<http://coalbed.com/PERMITS.htm>>.
18. *Permitting History of Coalbed Methane Wells In Alabama*, *supra* note 17.
19. *History of Coalbed Methane in Alabama*, *supra* note 13.
20. *Coalbed Methane Fields of Alabama*, State Oil and Gas Board of Alabama <<http://ogbweb.gsa.tuscaloosa.al.us/HTMLS/cbmflds.htm>>.
21. *Coalbed Methane Resources of Alabama*, State Oil and Gas Board of Alabama <<http://ogweb.gsa.tuscaloosa.al.us/HTMLS/coalmeth.htm>>.
22. *Coalbed Methane Fields of Alabama*, *supra* note 20.
23. James P. Holland, *Underground Storage of Natural Gas: A Legal Overview*, 3 EASTERN MIN. L. INST. 19-1 at 19-4 (1982).
24. *Id.*
25. See Section V, *Ownership Claims to Storage Container Space*, for the discussion of this issue.
26. See *Southern Ute Indian Tribe v. Amoco Production Co.*, 874 F. Supp. 1142 (D. Colo. 1995) (basing its decision, in part, on legislative intent) *rev'd* 119 F.3d. 816 (10th Cir. 1997); *Combs v. Hounshell*, 347 S.W.2d 550, 552 (Ky. 1961) (finding that the goal of deed construction is to effect the intent of the parties as that intent can be gathered from all of the provisions of the deed); *Conner v. Hendrix*, 72 S.E.2d 259, 265 (Va. 1952) (finding that the provisions are to be viewed as a whole, with effect and meaning being accorded to every word used in the instrument, if possible); *Horne v. Horne*, 26 S.E.2d 80, 84 (Va. 1943) (holding that intent is to be gathered from the language used throughout the instrument); *Ward v. Baylor*, 153 S.E. 894, 896 (Va. 1930) (finding that in interpreting an instrument, a court will generally attempt to determine the purpose and intent of the grantor); *James River & Kanawha Power Co. v. Old Dominion Iron & Steel Corp.*, 122 S.E. 344, 349 (Va. 1924) (finding intent of the deed is to be gathered from the deed as a whole); see also 30 U.S.C. §§ 181-287 (1994) (originally enacted as the Mineral Leasing Act of 1920, ch. 85, 41 Stat. 437); 30 U.S.C. §§ 541-541(i) (1994) (originally enacted as the Uraniferous Lignite Act of 1955, ch. 795, 69 Stat. 679); 43 U.S.C. § 299 (1994) (originally enacted as the Stock-Raising Homestead Act of 1916, ch. 9, 39 Stat. 862); 30 U.S.C. § 81 (1994) (originally enacted as Act of Mar. 3, 1909, ch. 270, 35 Stat. 844); 30 U.S.C. §§ 121-123 (1994) (originally enacted as Act of July 17, 1914, ch. 142, 38 Stat. 509); 30 U.S.C. §§ 83-85 (1994) (originally enacted as the Coal Lands Act of 1910, ch. 318, 36 Stat. 583); Act of June 15, 1880, ch. 223, 21 Stat. 199.
27. *Id.* A court cannot consider intent of the parties unless it determines that an ambiguity in the language exists. See J. Maddox's dissenting opinion in *Cantley v. Hubbard*, 623 So. 2d 1079, 1082 (Ala. 1993).
28. "Coal" is defined under the Bureau of Indian Affairs, Department of the Interior, the agency charged

---

with governing certain mineral regulations, as "*combustible carbonaceous rock, classified as anthracite, bituminous, subbituminous, or lignite* by A.S.T.M. designation O-388-666." Amoco Production Company's Brief in Support of its Motion for Summary Judgment on the Class Action Claim and the Class Action Defenses at 13, *Southern Ute Indian Tribe v. Amoco Prod. Co.*, No. 91-B02273 (D. Colo. filed Dec. 31, 1991) [hereinafter *Amoco's Brief in Support*]. The Dictionary of Mining, Mineral and Related Terms defines "coal" as:

*A solid, brittle, more or less distinctly stratified, combustible carbonaceous rock, formed by partial to complete decomposition of vegetation . . . not fusible without decomposition and very insoluble. The boundary line between peat and coal is hazy . . . as is the boundary line between coal and graphite and the boundary line between carbonaceous rock and coal . . .*

*Id.* At 108 (citing the DICTIONARY OF MINING, MINERAL AND RELATED TERMS 222 (1969)) (emphasis added).

Webster's Dictionary defines the term "coal" as follows:

*[A] black or brownish black solid combustible mineral substance formed by the partial decomposition of vegetable matter without free access of air and under the influence of moisture and in many cases increased pressure and temperature, the substance being widely used as a natural fuel and containing carbon, hydrogen, oxygen, nitrogen, and sulfur as well as inorganic constituents that are left behind as ash after burning . . .*

*Id.* At 108-09 (citing WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 432 (1976)) (emphasis added).

29. "Gas" has been defined as "[t]he aeriform fluid, having neither independent shape nor volume, but tending to expand indefinitely." *Amoco's Brief in Support, supra* note 28, at 111 (citing A GLOSSARY OF THE MINING AND MINERAL INDUSTRY 295 (1920)). The agency charged with governing certain mineral regulations, the Minerals Management Service, Department of the Interior, defines gas as: "[A]ny fluid, either combustible or noncombustible, which is extracted from a reservoir and which has neither independent shape nor volume, but tends to expand indefinitely; a substance that exists in a gaseous or rarified state under standard temperature and pressure conditions." *Id.* (Citing 43 C.F.R. § 3000.0-5 (1992); *accord* 30 C.F.R. §§ 206.151, 216.6(i) (1992)).

Another definition of gas is "a fluid (as air) that has neither independent shape nor volume but tends to expand indefinitely . . . ." *Amoco's Brief in Support, supra* note 28, at 112 (citing WEBSTER'S NEW THIRD INTERNATIONAL DICTIONARY 937 (1976)).

30. Paul N. Bowles, *Coalbed Gas: Present Status of Ownership Issue and Other Legal Considerations*, 1 E. MIN. L. INST. 7 (1980).
31. See *Rayburn v. USX Corp.*, No. 85-G-2661-W, 1987 U.S. Dist. LEXIS 6920 (N.D. Ala. 1987) (memorandum opinion and order), *aff'd without opinion*, 844 F.2d 796 (11th Cir. 1988); *Cantley v. Hubbard*, 623 So. 2d 1079 (Ala. 1993); *Vines v. McKenzie Methane Corp.*, 619 So. 2d 1305 (Ala. 1993); *Pinnacle Petroleum Co. v. Jim Walter Resources, Inc.*, No. CV-87-3012 (Ala. Cir. Ct. July

- 
- 28, 1989) (order partially granting defendant's motion for summary judgment); *Carbon County v. Baird*, No. DV 90-120, 1992 WL 464786, at \*9 (*Mont. Dist. Ct. Dec. 15, 1992*), *reversed sub nom. Carbon County v. Union Reserve Coal Co.*, 898 P.2d 680 (Mont. 1995); *United States Steel Corp. v. Hoge*, 468 A.2d 1380 (Pa. 1983).
32. *Amoco's Brief in Support*, *supra* note 28 at 108-09; *see also Skelly Oil Co. v. Savage*, 447 P.2d 395, 402 (Kan. 1968) (finding that liquids produced from a well are associated with the gas and such liquids are produced along with the gas; the gas cannot be produced without carrying with it the associated liquids); *Blocker v. Christie*, 340 S.W.2d 320, 321 (Tex. Civ. App. 1960) (finding that the evidence showed that the liquids involved look like oil, taste like oil, smell like oil and are stored and sold like oil; when the gas leaves the well head it is gaseous, and is also gaseous as it existed in the well).
33. Bowles, *supra* note 30, at 7-12.
34. *Amoco's Brief in Support*, *supra* note 28 at 108-09.
35. See discussion regarding ownership of the storage container space in Section V.
36. Bowles, *supra* note 30, at 7-12. The "surface" owner claim to coalbed methane would not be applicable in cases where only the surface was granted to the owner. It would, however, be applicable in situations where the coal, oil, and gas had been conveyed, but the other ("residual") minerals were owned by the "surface owner."
37. The majority of this section is excerpted from Elizabeth A. McClanahan, *Coalbed Methane: Myths, Facts, and Legends of its History and the Legislative and Regulatory Climate into the 21<sup>st</sup> Century*, 48 OKLA. L. REV. 471(1995).
38. *Amoco's Brief in Support*, *supra* note 28 at 57-62.
39. *United States Steel Corp. v. Hoge*, 468 A.2d 1380, 1382 (Pa. 1983).
40. *Id.*
41. *Id.* at 1384.
42. *Id.* at 1385.
43. *Rights to Coalbed Methane Under an Oil & Gas Lease for Lands in the Jicarilla Apache Reservation*, No. M-36970, 98 I.D. 59, 61-62 (1990).
44. *Id.* at 62-63.
45. *Id.* at 63.
46. *Id.* at 63-64.
47. *Carbon County v. Baird*, No. DV 90-120, 1992 WL 464786, slip op. at 4 (Findings of Fact).

- 
48. *Id.*
49. *Id.* at 5.
50. *Id.* at 7.
51. *Id.* at 8.
52. *Id.* at 10.
53. *Id.*
54. 468 A.2d 1380 (Pa. 1983).
55. Civ. No. 85-G-2661-W (N.D. Ala. July 28, 1987), *aff'd without opinion*, 844 F.2d 796 (11th Cir. 1988).
56. No. CV-87-3012 (Ala. Cir. Ct. July 29, 1989).
57. Memorandum at 23, *Carbon County* (No. DV 90-120).
58. *Carbon County*, No. DV-90-120, slip op. At 4 (Final Judgment and Decree).
59. *Id.* at 5-6.
60. *Id.* at 7.
61. *Carbon County v. Union Reserve Coal Co.*, 898 P.2d 680 (Mont. 1995).
62. *Id.* at 686.
63. *Id.*
64. *Id.* at 687.
65. *Id.*
66. *Id.*
67. *Id.* at 688.
68. *Id.* at 689.
69. *Id.* at 688.
70. *Southern Ute Indian Tribe v. Amoco Production Co.*, 874 F. Supp. 1142 (D. Colo. 1995) *rev'd* 119 F.3d 816 (10th Cir. 1997).
71. *Southern Ute Indian Tribe v. Amoco Production Co.*, 119 F.3d 816 (10th Cir. 1997).

- 
72. *Id.* at 821 n.4.
73. *Id.* at 826.
74. 88 Interior Dec. 538 (1981).
75. *Southern Ute*, 119 F.3d at 833.
76. *Id.* at 836.
77. For a detailed analysis of the case at the trial court level, see McClanahan, *supra* note 37, 498-506.
78. *Rayburn v. USX Corp.*, No. 85-G-2661-W, 1987 U.S. Dist. LEXIS 6920 at \*5 (N.D. Ala. 1987).
79. *Id.* at \*2 (emphasis added).
80. *Id.* at \*8-\*9.
81. *Vines v. McKenzie Methane Corp.*, 619 So. 2d 1305, 1306 (Ala. 1993).
82. *Id.*
83. *Id.* at 1307.
84. 468 A.2d 1380 (Pa. 1983).
85. Civ. No. 85-G-2661-W (N.D. Ala. July 28, 1987), *aff'd without opinion*, 844 F.2d 796 (11<sup>th</sup> Cir., 1988).
86. No. DV 90-120, 1992 WL 464786 (Mont. Dist. Ct. Dec. 14, 1992), *rev'd sub nom. Carbon County v. Union Reserve Coal Co.*, 898 P.2d 680 (Mont. 1995).
87. *Vines*, 619 So. 2d at 1308.
88. *Id.* at 1308-09. See generally *Carter Oil Co. v. Blair*, 57 So. 2d 64 (Ala. 1952).
89. *Vines*, 619 So. 2d at 1309. Two of the justices rendered a dissenting opinion, contending that the Deeds were ambiguous. Thus, the dissent concluded that the trial court erred in holding, as a matter of law, that the parties to the Deeds could have contemplated the conveyance of coalbed methane gas, which was of no commercial value at the time of the Deeds. The date of the conveyance and the minerals commonly recognized at the time of the conveyance were determinative of the issue. This interpretation was based on several cases. *Id.*
90. *Cantley v. Hubbard*, 623 So. 2d 1079, 1080 (Ala. 1993).
91. *Id.* at 1079.
92. 619 So. 2d 1305 (Ala. 1993).

- 
93. *Cantley*, 623 So. 2d at 1080. Justice Maddox entered a dissenting opinion stating that the reservation in the 1929 warranty deed contained a “latent ambiguity” and thus concluded that summary judgment was inappropriate. *Id.* at 1082.
94. For additional discussion of the *West* case, see John Land McDavid, Summary, *Construction of Express of “all coal” in Deed*, 9 E. MIN. LAW FOUND. CASE UPDATE 16 (1994).
95. *West*, 631 So. 2d at 216.
96. *Id.* at 216-17.
97. *Id.* at 222-23.
98. *Id.* at 224.
99. *Id.* at 223 (citing *Williams v. Gibson*, 4 So. 350, 353-54 (Ala. 1888)). The *Williams* court based its findings on the “rule of capture.” See Robert E. Hardewicke, *The Rule of Capture and Its Implications as Applied to Oil and Gas*, 13 TEXAS L. REV. 391, 393 (1935)).
100. *West*, 631 So. 2d at 224.
101. *Id.* at 229.
102. *Id.* On December 10, 1993, the Alabama Supreme Court overruled an application for rehearing. The court, however, modified its October 8, 1993 opinion by adding the final sentence of the above-referenced quote.
103. *Id.*
104. *Id.* Justice Maddox, however, wrote a dissenting opinion. He interpreted the deeds at issue as ambiguous and, therefore, determined that the rules of deed construction set forth in *Nettles v. Lichtman*, 152 So. 2d 450, 452 (Ala. 1934) and *Williams v. Johns-Carroll Lumber Co.*, 192 So. 278, 280 (Ala. 1939) were applicable. Justice Maddox did not believe that the parties to the Deeds contemplated coalbed methane development at the time the deeds were executed. He reasoned: “Why would a party retain the right to something which is only a waste product with well-known dangerous propensities? . . . It strains credulity to think that the grantor intended to reserve the right to extract a valueless waste product with the attendant potential responsibility for damages resulting from its dangerous nature.” *West*, 631 So. 2d at 232 (Maddox, J., dissenting) (quoting *Vines v. McKenzie Methane Corp.*, 619 So. 2d 1305, 1308 (Ala. 1993)). Although the definition of “gas,” included in the oil and gas statutes in effect at the time, was broad enough to include coalbed methane, Justice Maddox also noted that such a conclusion was probably not the intention of the legislature. *Id.* at 230-31 (referencing Ala. Code § 9-17-1). Justice Maddox was unable to distinguish the *Vines* and *Hoge* cases from the case at bar and would have, therefore, applied the holdings in these cases (*Vines* and *Hoge*) to the present case. *Id.* at 232.
105. *In re: Hillsborough Holdings Corp.*, 207 B.R. 299, 302 (Bankr. M.D.Fla. 1997) (citing *NCNB Tex. Nat’l Bank, N.A. v. West*, 632 So.2d 212, 223-24 (Ala. 1993)).
106. *Id.* at 304.

- 
107. *Id.* at 305.
108. *Id.*
109. *Id.* at 306.
110. 186 S.E.2d 20 (Va. 1986).
111. *Id.* at 22.
112. *Finite*, (No. 93-L-47).
113. *Id.* (Complaint at 2-5).
114. *Id.*; see Answer to Defendants/Counterplaintiff's Affirmative Defenses and Counterclaims at 1-2.
115. *Id.* at 10.
116. *Id.* at 9-10.
117. *Id.* at 10.
118. *Id.* at 11-12.
119. M. Jill Morgan & Elizabeth A. McClanahan, *Competing Ownership Claims to Coalbed Methane in the Appalachian Basin*, LANDMAN, July-Aug. 1990, at 23.
120. *Id.*
121. *Id.*
122. *Id.*
123. See *International Salt Co. v. Geostow*, 878 F.2d 570, 575 (2d Cir. 1989).
124. Morgan & McClanahan, *supra* note 119.
125. *Id.*
126. *Pinnacle Petroleum Co.*, No. CV-87-3012 (Ala. Cir. Ct. July 28, 1989) (order partially granting defendant's motion for summary judgment).
127. *Id.* Litigation in the case has continued in certain bankruptcy proceedings. The court granted Pinnacle's motion to sever claims against Jim Walter to allow Pinnacle to proceed against the solvent defendants. *Id.*
128. The majority of this section is excerpted from McClanahan, *supra* note 37. Discussions of *Cantley v. Hubbard*, 623 So. 2d 1079 (Ala. 1993) and *In re: Hillsborough Holdings Corp.*, 207 B.R. 299



---

(Bankr. M.D.Fla. 1997) have not been included in this analysis. The decision in *Cantley* did

not address the coalbed methane ownership issues in the same context as the other cases included in this analysis, and the *Hillsborough* case was not decided by an Alabama court.

129. No. 85-G-2661-W, 1987 U.S. Dist. LEXIS 6920 (N.D. Ala. July 28, 1987), *aff'd without opinion*, 844 F.2d 796 (11th Cir. 1988).
130. 619 So. 2d 1305 (Ala. 1993).
131. 631 So. 2d 212 (Ala. 1993).
132. No. CV-87-3012 (Ala. Cir. Ct., July 28, 1989) (order partially granting defendant's motion for summary judgment).
133. 468 A.2d 1380 (Pa. 1983).
134. No. 85-G-2661-W, 1987 U.S. Dist. LEXIS 6920 (N.D. Ala. 1987), *aff'd without opinion*, 844 F.2d 796 (11th Cir. 1988).
135. *Id.* at \*3.
136. 619 So. 2d 1305 (Ala. 1993).
137. *Id.*
138. 468 A.2d 1380 (Penn. 1983).
139. *Vines*, 619 So.2d at 1308.
140. *Id.* at 1308-09.
141. *Id.* at 1309.
142. Gob gas is coalbed methane derived from the gob. The "gob" is the "de-stressed zone associated with any full-seam extraction of coal that extends above and below the mined-out coal seam." VA. CODE ANN. § 45.1-361.1 (Michie 1994). "A gob well is one drilled from the surface of the earth down to a stratum where Coalbed Gas released from a coal mine 'gob' can be extracted. The gob is produced by the longwall mining method . . . ." *NCNB Texas Nat'l Bank v. West*, 631 So. 2d 212, 215 (Ala. 1993).
143. 631 So. 2d 212 (Ala. 1993).
144. *Id.* at 216.
145. *Id.* at 216-17.
146. *Id.* at 223.

- 
147. *Id.* at 223-24.
148. *Id.* at 223.
149. *Id.* at 229.
150. No. CV-87-3012 (Ala. Cir. Ct., July 28, 1989) (order partially granting defendant's motion for summary judgment).
151. Jeff L. Lewin, *Coalbed Methane: Recent Court Decisions Leave Ownership "Up in the Air," but New Federal and State Legislation Should Facilitate Production*, 96 W.Va. L. Rev. 631 (Spring, 1994)
152. W.L. Summers, LAW OF OIL & GAS, § 758.1 at 84 (Supp. 1997).
153. *Id.*
154. Ala. Code § 9-17-154 (1997).
155. Ala. Code § 9-17-155 (1997).
156. *Id.*
157. Ala. Code § 18-1A-1 (1997) *et seq.*
158. Ala. Code § 18-1A-21 (1997).
159. *Id.*
160. Ala. Code § 18-1A-22 (1997); Ala. Code § 18-1A-55 (1997) ("An action to condemn property may not be maintained over timely objection by the owner unless the condemnor has offered to acquire the property on the basis of its approved offer by purchase before commencing the action.").
161. Ala. Code § 18-1A-71 (1997).
162. Ala. Code § 18-1A-72(a)(2) (1997).
163. *Attebery v. Blair*, 91 N.E. 475, 479 (Ill. 1910) (finding mineral owner could "use the space where the coal was found in any way which they saw fit"); *Lillibridge v. Lackawana Coal Co.*, 22 A. 1035, 1037 (Pa. 1891) (explaining that the surface owner "cannot possibly use any part of the space left by the removal of the coal, and hence they are not obstructed in the slightest degree. The right to use that space is exclusively in the" mineral owner).
164. See *Webber v. Vogel*, 42 A. 4, 5 (Pa. 1899) (stating that although *Lillibridge* is not overruled, the coal owner has a right to the mine space only while work was progressing. The coal interest did not include "an undisputed and perpetual right of way under another's land"); *Texas American Energy Corp. v. Citizens Fidelity Bank and Trust Co.*, 736 S.W.2d 25 (Ky. 1987). See also *Pomposini v. T.W. Phillips Gas and Oil Co.*, 580 A.2d 776 (Pa. 1990) (absent an express agreement, the right to extract gas did not include the right to use cavernous spaces owned by the lessor for the storage of gas).

- 
165. See, *International Salt Co. v. Geostow*, 878 F.2d 570 (2nd Cir. 1989) (granting right to use of excavated cavity so long as mine is not exhausted or abandoned to owner of mineral interest. Use of cavity is contingent upon the fact that the mine is not exhausted or abandoned. Mineral owner owns only the salt, not the excavation cavity or containing chamber. However, the court indicated a deed granting “mines and minerals” could entitle the mineral owner to the container space after minerals are depleted).
166. Summers, *supra* note 152, n. 67.5. See, *Ellis v. Arkansas Louisiana Gas Co.*, 450 F. Supp. 412 (E.D. Okla. 1978) (holding that a grant of minerals gives grantee the right to explore and produce the minerals — grant does not convey “the stratum of rock containing the pore spaces within which the oil and gas may be found”) (the American rule is that the cavern which remains after the hard minerals are mined is owned by the surface owner) (portion of case involving prescriptive easement affirmed by 609 F.2d 436 (10<sup>th</sup> Cir. 1979)); *Emeny v. United States*, 412 F.2d 1319 (Cl. Ct. 1969) (oil and gas leases for purposes of mining and operating for oil and gas do not grant rights to store foreign minerals in closed structure or underground dome under leased property); *Miles v. Home Gas Co.* 35 A.D.2d. 1042 (N.Y. 1970) (grant of “all the oil, gas and minerals . . . together with right at all times to enter on said premises and to bore wells, make excavations, lay pipes and remove all oil, gas and minerals found thereon” conveyed rights pertaining only to production and transmission and could not be construed to cover use of depleted domes or strata for storage of gas from foreign fields); *U.S. v. 43.42 Acres of Land*, 520 F. Supp. 1042 (W.D. La. 1981)(in dispute over ownership of a salt cavern which was to be used for oil storage, the court held “that the facts presented by this case are more closely analogous to the general rule in common law states which provides that, after the removal of minerals, the opening left by the mining operations belongs to the land owner by operation of law”); *Mallon Oil Co.*, 104 IBLA 145, 150 (Sept. 2, 1988)(“The general rule in the United States appears to be that, once the minerals have been removed from the soil, the space occupied by the minerals reverts to the surface owner by operation of law”); *Dep’t of Transp. v. Goike*, 560 N.W.2d 365 (Mich App. 1996) (storage space, once it has been evacuated of the minerals and gas, belongs to the surface owner).
167. Ali M.M. Modjehi, *Ownership Rights in Subsurface Natural Gas Storage Areas*, 16 Tulsa L. J. 470 (1981).
168. *Bagley v. Republic Iron & Steel Co.*, 69 So. 17 (Ala. 1915) citing *Webber v. Vogel*, 189 Pa. 156.
169. Ala. Rule 400-4-1-.01.
170. Ala. Code § 9-17-1(4) (1997).
171. Ala. Rule 400-1-1-.03(22).
172. Ala. Rule 400-1-1-.01(23).
173. Ala. Rule 400-4-1-.02(3).
174. Ala. Rule 400-4-1-.02(5).
175. Ala. Code § 9-17-2 (1997).
176. Ala. Code § 9-17-6 (1997).

- 
177. Ala. Code § 9-17-9 (1997).
178. Ala. Code § 9-17-24 (1997); Ala. Rules 400-1-2-.01; 400-4-2-.01.
179. Ala. Rule 400-1-2-.01(2).
180. Ala. Rule 400-1-2-.01(3)(b). The plat must be submitted in triplicate and show the direction of north and distances of the proposed well to the nearest unit boundaries and section lines and from the nearest well in the same section completed in or drilling to the same reservoir. The plat must also indicate location and status of all other wells drilled in said section.
181. Ala. Rule 400-1-2-.01(3)(d). The bond shall be payable to the State of Alabama and conditioned that the principal shall prevent the escape of oil or gas out of one stratum to another, prevent waste, prevent the intrusion of water into any oil or gas stratum, prevent the pollution of the sea, prevent pollution of all surface and ground water, and prevent pollution of fresh-water supplies by oil, gas, salt water, or any other substance. The bond must be conditioned also that the principal shall make all reports and records required by the Supervisor and file with the Supervisor drill cuttings and cores within six (6) months of completion of well, and shall comply with all rules and regulations of the Board. Ala. Rule 400-1-2-.03(1).
182. Ala. Rule 400-1-2-.01(3)(a)-(g).
183. Ala. Rule 400-1-2-.01(5).
184. Ala. Rule 400-1-2-.01(6).
185. Ala. Rule 400-4-2-.02.
186. Ala. Rule 400-4-2-.02(1). The Supervisor may approve a permit application for a unit consisting of approximately 40 contiguous surface acres other than a governmental quarter-quarter section. The Supervisor may also require that a coalbed methane gas well to be drilled on a unit contiguous with an existing field be drilled as an extension of the field. The Board may grant an exception to the spacing rules where it is shown that a well located in accordance with the rules would be nonproductive, would not be at the optimum position for the most efficient and economic drainage of the unit, or where topographical conditions are such as to make the drilling at an authorized location on the unit unduly burdensome. Furthermore, no coalbed methane gas well shall be located 200 feet from any permanent residence. Ala. Rule 400-4-2-.02(1)-(5).
187. Ala. Code § 9-17-12 (1997); Ala. Rule 400-4-2-.02(6).
188. Ala. Rule 400-4-1-.01(5); Ala. Rule 400-1-1-.01(2).
189. Ala. Rule 400-1-3-.01.
190. The operations include construction of any pit, spudding, setting surface casing, slotting casing, running intermediate or production pipe, cleaning, perforating, chemical treatment, logging, testing of well, disposing of pit fluids, plugging, recompleting, restoration of location. Ala. Rule 400-4-3-.01.

- 
191. Ala. Rule 400-1-3-.03.
192. Ala. Rule 400-4-3-.02.
193. Ala. Rule 400-1-3-.06.
194. Ala. Rule 400-1-3-.06.
195. Ala. Rule 400-4-3-.03(1).
196. Ala. Rule 400-4-3-.03(2).
197. Ala. Rule 400-4-3-.03(3),(4).
198. Ala. Rule 400-4-3-.03(5).
199. Ala. Rule 400-1-3-.10. Pertinent information includes drilling contractor; spud date; ground level, derrick floor, and kelly bushing elevations surveyed by a licensed land surveyor or registered professional engineer; total depth; kick-off point depths and directions of any sidetracks; bottom-hole location; casing and liner record; cement record; squeeze cement record; perforation record; tubing record; the depth and type of any plugs or packers set; well stimulation and treatment record; drill stem test record; and a record of all wireline logging, sampling, and coring operations for said well.
200. Ala. Rule 400-1-10-.01.
201. Ala. Code § 9-17-81 (1997).
202. Ala. Code § 9-17-82 (1997).
203. Ala. Code § 9-17-13 (1997).
204. *Id.*
205. *Id.*
206. Ala. Rule 400-1-13-.01(4).
207. Ala. Rule 400-1-13-.01(5). The designated operator must notify the non-consenting owner of the following events: (i) commencement of drilling operations; (ii) suspension of drilling operations; (iii) shutting in of the well; (iv) plugging of the well; (v) commencement of production. In addition, the non-consenting operator must be provided the gross amount of monthly production from the forced integrated or forced pooled unit, and the value thereof.
208. *Id.*
209. Ala. Rule 400-1-13-.01(6).
210. Ala. Rule 400-1-9-.01(a).

- 
211. Ala. Rule 400-1-9-.01.
212. Ala. Rule 400-1-8-.01.
213. Ala. Rule 400-1-8-.04. "Rural locations" are those locations that lie outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, or a community development. Ala. Rule 400-1-8-.04(2)(d).
214. Ala. Rule 400-1-8-.04(3).
215. Ala. Rule 400-1-8-.04(8).
216. Ala. Rule 400-1-12-.02.
217. Ala. Rule 400-1-12-.04.
218. Ala. Code § 9-17-25 (1997).
219. *Id.*
220. *Id.*
221. *Id.*
222. Ala. Code § 9-17-133 (1997).
223. Ala. Code § 9-17-130 (1997).
224. Ala. Code § 9-17-134 (1997).
225. Ala. Code § 9-17-151 (1997).
226. Ala. Code § 9-17-150(1) (1997).
227. Ala. Code § 9-17-150(2) (1997).
228. Ala. Code § 9-17-150(3) (1997).
229. Ala. Code § 9-17-151(a) (1997).
230. Ala. Code § 9-17-151(b) (1997).
231. Ala. Code § 9-17-152(a) (1997).
232. *Id.*
233. Ala. Code § 9-17-152(b) (1997).

- 
234. Ala. Code § 9-17-152(e) (1997).
235. Ala. Code § 9-17-153(b) (1997).
236. Ala. Code § 9-17-153(b) (1997).
237. Ala. Code § 9-17-156 (1997).
238. Ala. Code § 9-17-157 (1997). "Secondary recovery methods" include the maintenance of reservoir pressures by any method recognized by the industry and approved by the Board, recycling, flooding a pool or pools or parts thereof with air, gas, water, liquid hydrocarbons or any other substance or any other secondary method of producing hydrocarbons recognized by the industry and approved by the Board. Ala. Code § 9-17-80. "Tertiary recovery methods" include the maintenance or partial maintenance of reservoir pressures by any method recognized by the industry as a tertiary method of recovery and approved by the Board, recycling, injecting or flooding a pool, or pools, or parts thereof, with air, gas, water, hydrocarbons, carbon dioxide or any other substance, including the use of polymers, steam flooding or fire flooding, or any other tertiary method recognized by the industry and approved by the Board. Ala. Code § 9-17-83(7) (1997).
239. Ala. Code § 37-4-82 (1997).
240. Ala. Code § 37-4-80(3) (1997).
241. Ala. Code § 37-4-80(2) (1997).
242. Telephone Interview with Chris Harvey, Administrator of Gas Pipeline Safety, Alabama Public Service Commission (May, 1998).
243. Ala. Code § 37-4-81 (1997).
244. Telephone Interview with Chris Harvey, Administrator of Gas Pipeline Safety, Alabama Public Service Commission (May, 1998).
245. *Id.* See also Ala. Code 37-4-80(6) (1997).
246. 49 CFR § 192.
247. 49 CFR § 191.
248. 49 CFR § 199.
249. 49 U.S.C. §§ 1671 to 1687.
250. Telephone interview with David E. Boling, Assistant Supervisor, Production and Engineering, State Oil and Gas Board of Alabama (May, 1998).
251. In addition, this report did not address the jurisdiction of any federal agencies or any federal regulations, other than those that have been adopted by a state agency, that would apply to

---

underground storage. For example, the Federal Energy Regulatory Commission and the U.S. Department of Transportation could exercise jurisdiction over facilities that store gas moving in interstate commerce.

252. 631 So. 2d 212 (Ala. 1993).